HCD-H11/H11J

SERVICE MANUAL

AEP Model
UK Model
E Model
Australian Model
HCD-H11
Saudi Arabia Model
HCD-H11/H11J

- HCD-H11 is the tuner deck, CD and amplifier section in CHC-P11.
- HCD-H11J is the tuner deck, CD and amplifier section in CHC-P11J.

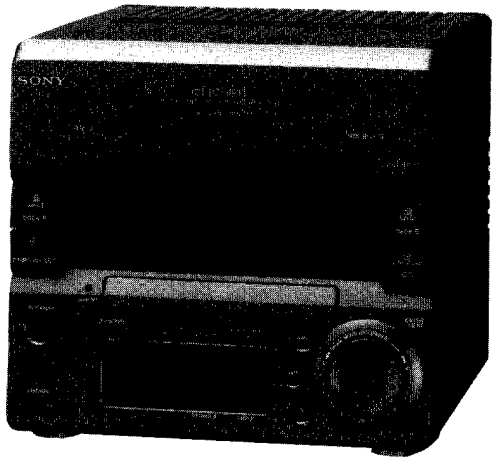

Photo : AEP Model

Dolby noise reduction manufactured under license from Dolby Laboratories Licensing Corporation.
"DOLBY" and the double-D symbol ⧈ are trademarks of Dolby Laboratories Licensing Corporation.

CD Section	Model Name Using Similar Mechanism	HCD-H801
	CD Mechanism Type	CDM28-5BD19
	Base Unit Name	BU-5BD19
Tape deck Section	Model Name Using Similar Mechanism	HCD-H881
	Tape Transport Mechanism Type	TCM- 220WR2

SPECIFICATIONS

CD player section

System: Compact disc digital audio system
Laser: Semiconductor laser (λ =780nm)
Emission duration : continuous
Laser output: Max 44.6µW*
*This output is the value measured at a distance of 200 mm from the objective lens surface on the Optical Pick-up Block with 7 mm aperture.
Wavelength: 780–790 nm
Frequency response: 2Hz – 20kHz
Signal-to-noise ratio: More than 65 dB
Dynamic range: More than 97 dB

Tuner section

FM stereo, FM/AM superheterodyne tuner

FM tuner section

Tuning range
Except East European model : 87.5 - 108.0MHz (50kHz step)
East European model :
FM1 : 65 - 74 MHz (10kHz step)
FM2 : 87.5 - 108 MHz (50kHz step)
Antenna: FM lead antenna
Antenna terminals: 75 ohm unbalanced
Intermediate frequency: 10.7MHz

AM tuner section

Tuning range
AEP, UK, East European, German model :
MW : 531 - 1,602kHz
LW : 153 - 279kHz
Italian model :
MW : 522 - 1,611kHz (9kHz step)
LW : 153 - 279kHz
E3, Saudi Arabia, Hong kong, Malaysia, Singapore, Taiwan model :
MW : 531 - 1,602kHz (9kHz step)
530 - 1,710kHz (10kHz step)
SW : 5.95 - 17.9kHz
E2, Mexican, Argentine model :
AM : 531 - 1,710kHz (9kHz step)
AM : 530 - 1,710kHz (10kHz step)
Australian model
AM : 531 - 1,602kHz (9kHz step)
AM : 530 - 1,710kHz (10kHz step)
Antenna: AM loop antenna
External antenna terminals
Intermediate frequency: 450kHz

Tape player section

Recording system: 4-track 2-channel stereo
Frequency response
(DOLBY NR OFF)
40 - 13,000 Hz (±3 dB), using Sony TYPEI cassette
40 - 14,000 Hz (±3 dB), using Sony TYPEII cassette
Wow and flutter: 0.1% WRMS ±0.3%(DIN)

Amplifier section

Peak music power output: 400W

–Continued on Page 2–

MINI Hi-Fi COMPONENT SYSTEM

SONY®

MICROFILM

Continuous RMS power output
23W + 23W (4 ohms at 1kHz, 5% THD)

Inputs
MD IN : Sensitivity 450 mV, impedance 47 kilohms

Outputs
MD OUT :Senitivity 250 mV, 1kΩ
PHONES (stereo phone jack) :
accept headphones of 8 ohms or more.

Supplied accessories

AM loop antenna (1)
Remote (1)
Sony SUM-3 (NS) batteries (2)
FM lead antenna (1)

General

Destination	Power requirements	Power consumption
Mexican model	120v AC,60Hz	75W
AEP, UK, German, Italian, East European model	220 - 230V AC, 50/60Hz	
Australian model	240V AC, 50/60Hz	
E, Saudi Arabia, Hong Kong, Singapore, Argentine, Malaysia, Taiwan model	110 - 120V/ 220 - 240V AC, 50/60Hz Adjustable with the Voltage Selector	

Dimensions Approx. 225 x 210x235 mm (w/h/d) incl. projecting parts and controls
Mass Approx.4.8kg

Design and specifications are subject to change without notice.

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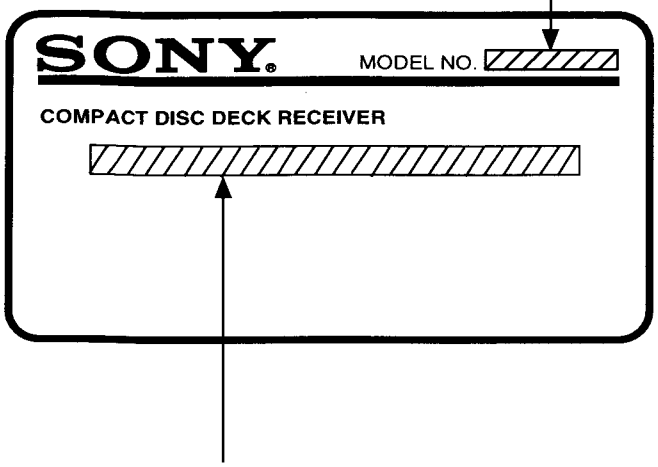
SECTION 1
SERVICING NOTES

MODEL IDENTIFICATION
(Specifcation Lable)

HCD-H11
HCD-H11J



AEP, UK, German, Italian,
East Europian model : AC220-230V~50/60Hz
Australian model : AC240V~50Hz
Maxican model : AC120V~60Hz
E, Saudi Arabia, Hong Kong,
Singapore, Argentine,
Malaysia, Taiwan model: AC110-120V/220-240V~50/60Hz

SAFETY-RELATED COMPONENT WARNING!!

COMPONENTS IDENTIFIED BY MARK ⚠ OR DOTTED LINE WITH MARK ⚠ ON THE SCHEMATIC DIAGRAMS AND IN THE PARTS LIST ARE CRITICAL TO SAFE OPERATION.

REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY.

NOTES ON HANDLING THE OPTICAL PICK-UP BLOCK OR BASE UNIT

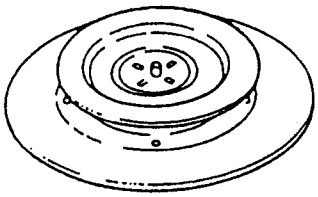
The laser diode in the optical pick-up block may suffer electrostatic breakdown because of the potential difference generated by the charged electrostatic load, etc. on clothing and the human body.
During repair, pay attention to electrostatic breakdown and also use the procedure in the printed matter which is included in the repair parts.
The flexible board is easily damaged and should be handled with care.

NOTES ON LASER DIODE EMISSION CHECK

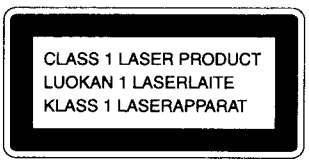
The laser beam on this model is concentrated so as to be focused on the disc reflective surface by the objective lens in the optical pick-up block. Therefore, when checking the laser diode emission, observe more than 30 cm away from the objective lens.

CHUCK PLATE JIG ON REPAIRING

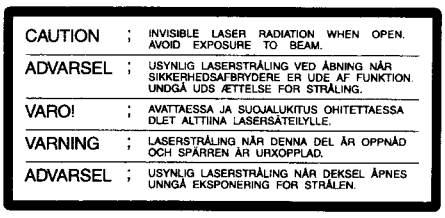
On repairing CD section, playing a disc without the CD lid, use Chuck Plate Jig.
● Code number of Chuck Plate Jig : X-4918-255-1



Laser component in this product is capable of emitting radiation exceeding the limit for Class 1.



This appliance is classified as a CLASS 1 LASER product. The CLASS 1 LASER PRODUCT MARKING is located on the rear exterior.


CAUTION ; INVISIBLE LASER RADIATION WHEN OPEN. AVOID EXPOSURE TO BEAM.
ADVARSEL ; USYNLIG LASERSTRÅLING VED ÅBNING NÅR SIKKERHEDSAFBRYDERE ER UDE AF FUNKTION. UNDGÅ UDS ÆTTELSE FOR STRÅLING.
VARO! ; AVATTAESSA JA SUOJALUKITUS OHITETTAESSA OLET ALTTIINA LASERSÄTEILYLLE.
VARNING ; LASERSTRÅLING NÄR DENNA DEL ÄR OPPNAD OCH SPÄRREN ÄR URXOPPLAD.
ADVARSEL ; USYNLIG LASERSTRÅLING NÅR DEKSEL ÅPNES UNNGÅ EKSPONERING FOR STRÅLEN.

This caution label is located inside the unit.

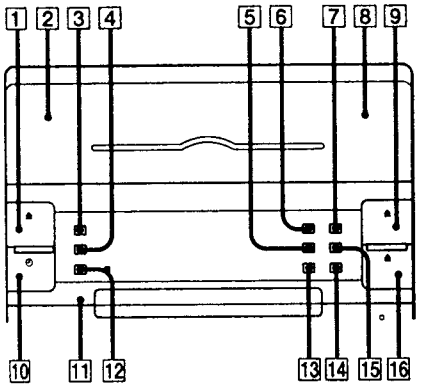
CAUTION
Use of controls or adjustments or performance of procedures other than those specified herein may result in hazardous radiation exposure.

This section is extracted from instruction manual.

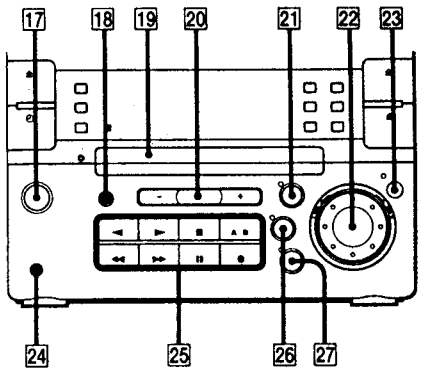
Index to Parts and Controls

Refer to the pages indicated in parentheses for how to use the controls.

Front Panel



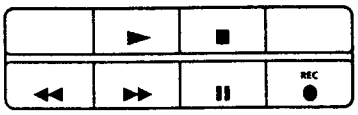
1 ⏏ EJECT DECK A button
2 DECK A
3 DISPLAY button
4 SLEEP button
5 CD CYNCHRO button
6 DOLBY NR button
7 DIRECTION MODE button
8 DECK B
9 ⏏ EJECT DECK B button
10 TIMER SELECT button
11 CLOCK SET button
12 TIMER SET button
13 PLAY MODE button
14 REPEAT button
15 HI-SPEED DUBBING button
16 ⏏ OPEN/CLOSE CD button



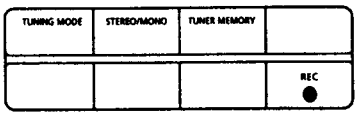
17 SYSTEM POWER ON/STANDBY button
18 FUNCTION button
19 Disk tray
20 VOLUME +/– button
21 TAPE button and lamp
22 Jog dial
23 ENTER/NEXT button
24 PHONES jack (stereo phone jack)
25 Operating buttons*
26 TUNER/BAND button and lamp
27 CD button and lamp

* Operating buttons
The buttons you can operate for CD player, tuner, or tape player light up.

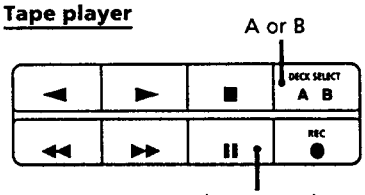
CD player



Tuner

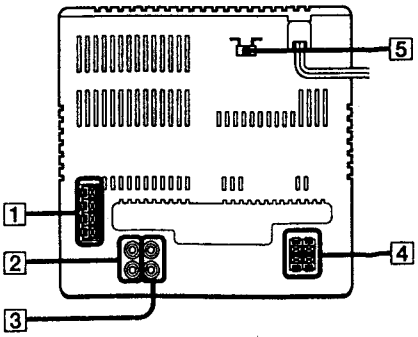


Tape player



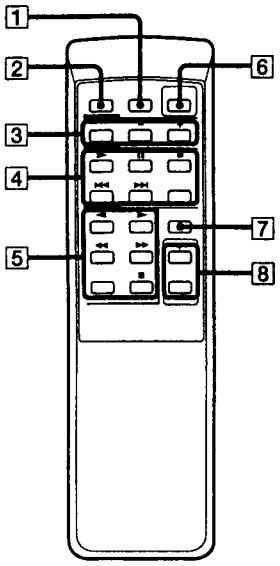
Note
• A or B lights up when you operate CD player or tuner. However, you can ignore it.

Rear Panel



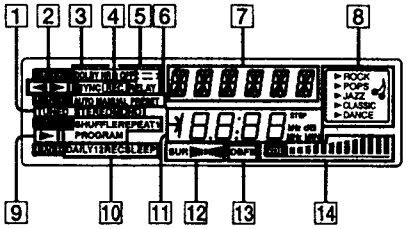
1 Aerial terminals
2 MD OUT jacks
3 MD IN jacks
4 Speaker connectors
5 Voltage Selector
(E, Saudi Arabia, Argentine, Hong Kong, Mexican, Malaysia, Singapore, Taiwan model)

Remote



1 SLEEP button
2 DBFB button
3 Tuner operating buttons
BAND button
PRESET +/– button
4 CD operating buttons
► (play) button
II (pause) button
■ (stop) button
I◄◄ /►►I button
EDIT button
5 Tape operating buttons
◄/► (reverse side/front side) play buttons
■ (stop) button
◄◄/►► buttons
DECK SELECT button
6 SYSTEM POWER switch
7 SELECT 1 – 5 button
8 VOLUME +/– buttons

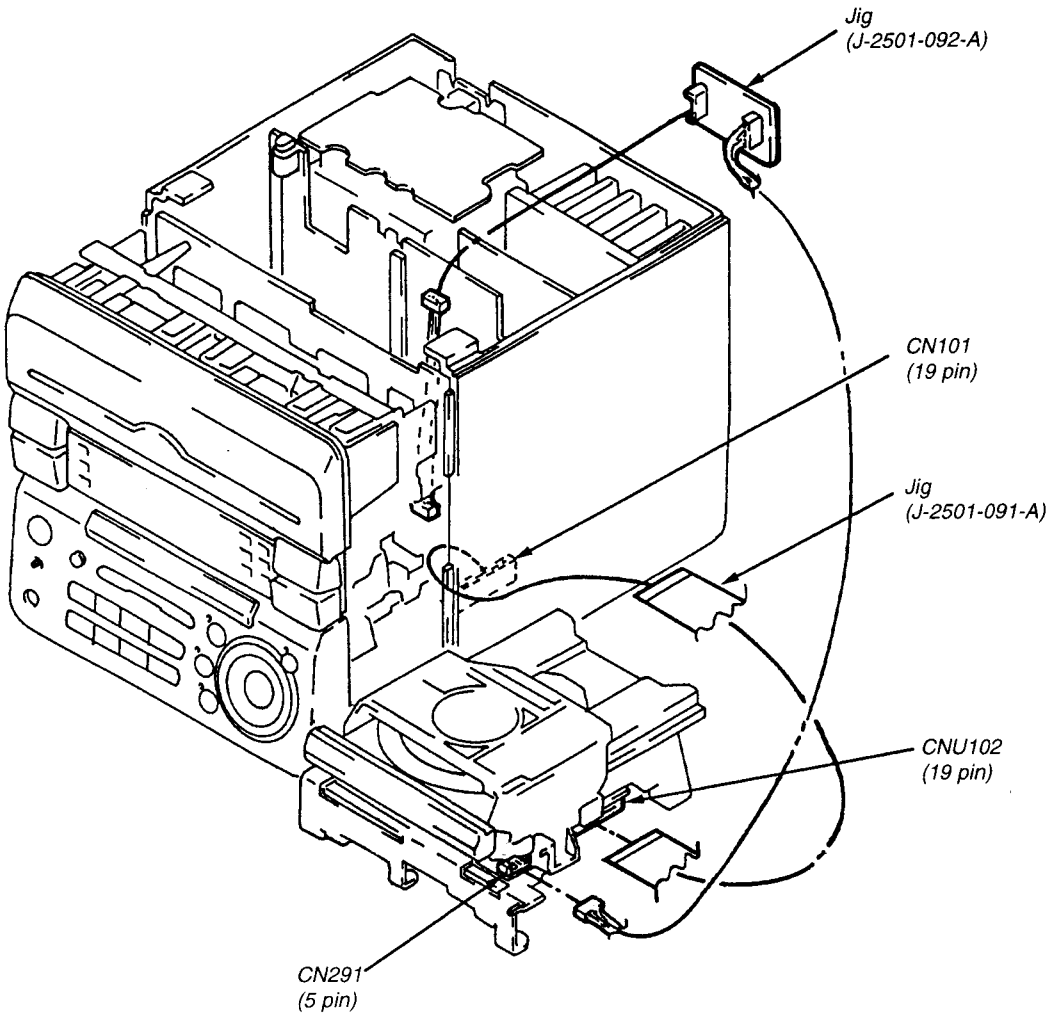
Display Window



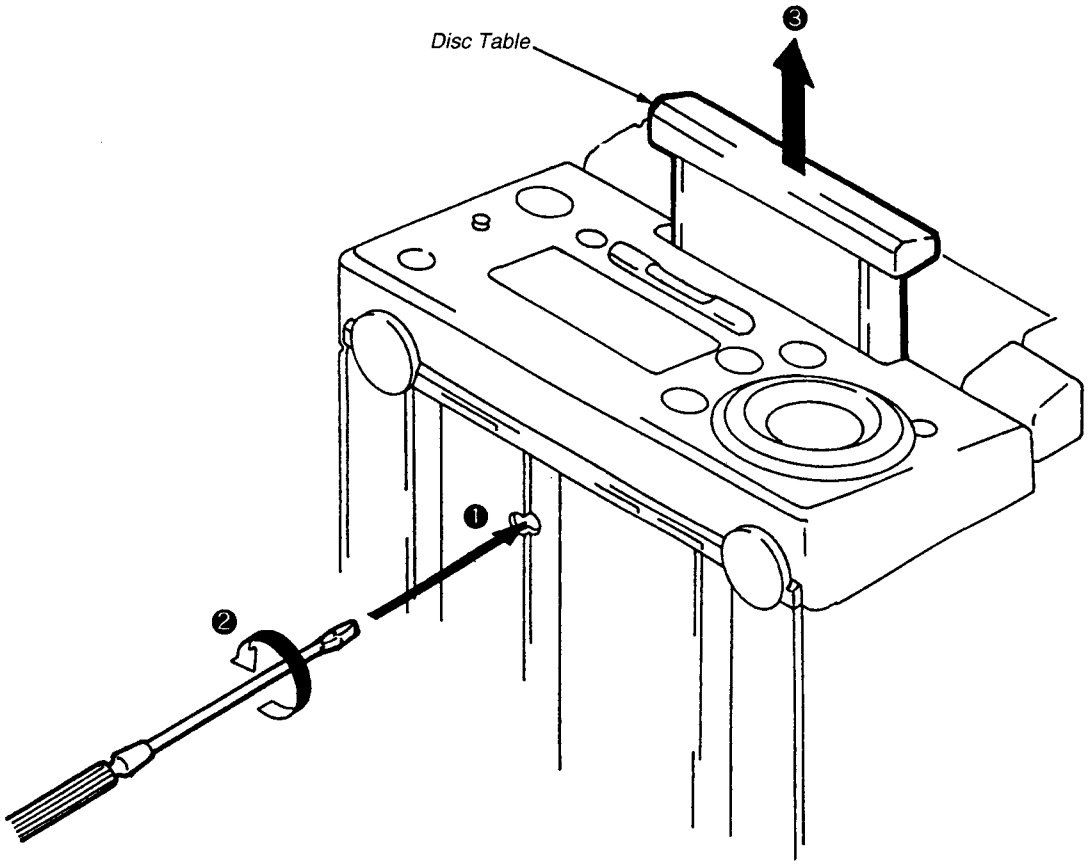
1 Tuner indications
2 Tape play indications
3 DOLBY NR indication
4 CD SYNCHRO indication
5 Tape direction indications
6 AUTO/MANUAL/PRESET indications
7 Function indications
8 Audio emphasis indications
9 CD play mode indications
10 Timer indications
11 Frequency/time indication
12 SUR indication
13 DBFB indication
14 VOLUME indication

Notes for repairing CD MECHANISM section electric flow.

Two jigs (J-2501-091-A and J-2501-092-A) are necessary for the CD MECHANISM section electric flow.
Connect SET and JIG as shown in the figure below and turn the power switch on.



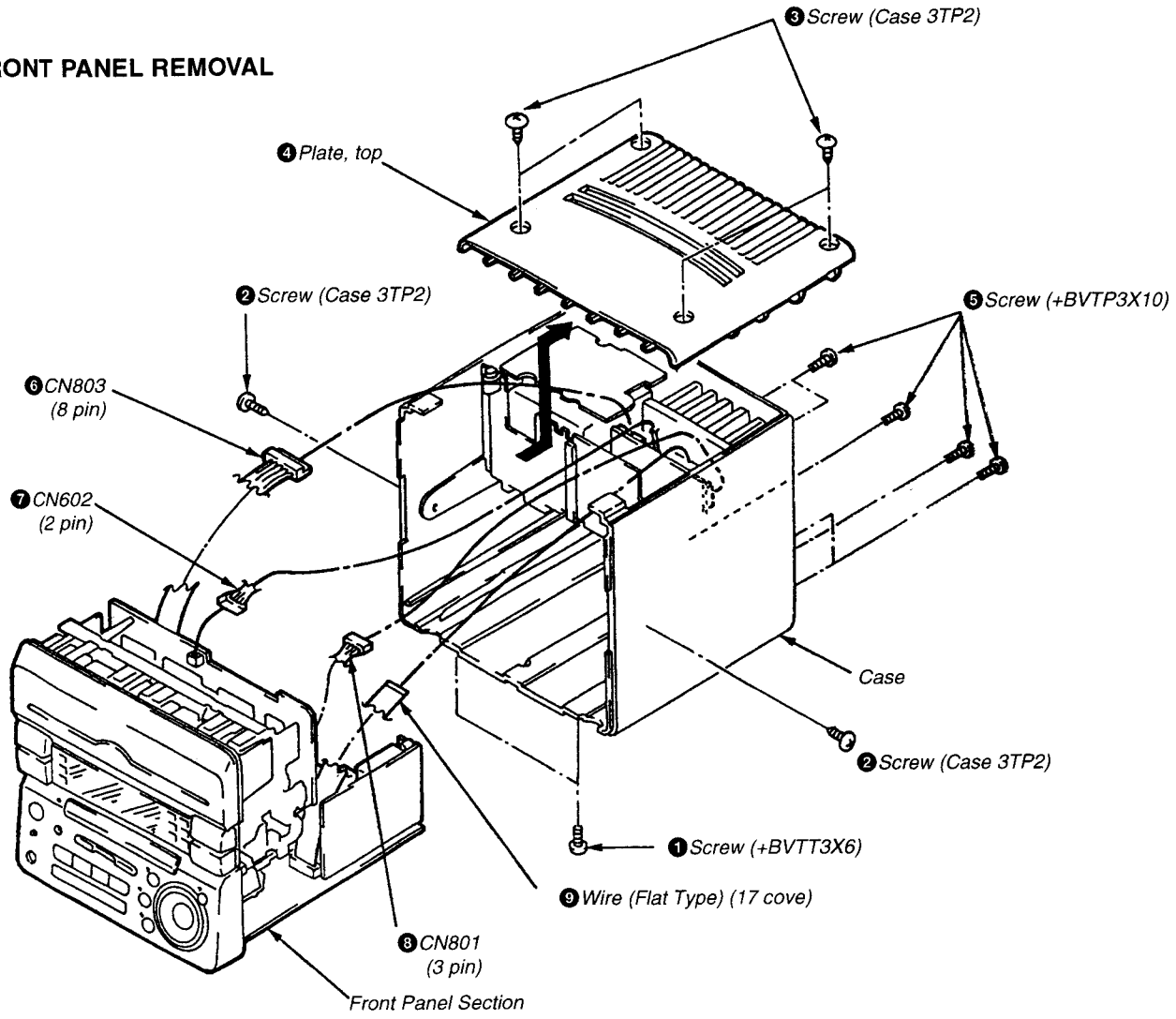
● **Disc table getting out procedure on the power supply is OFF**



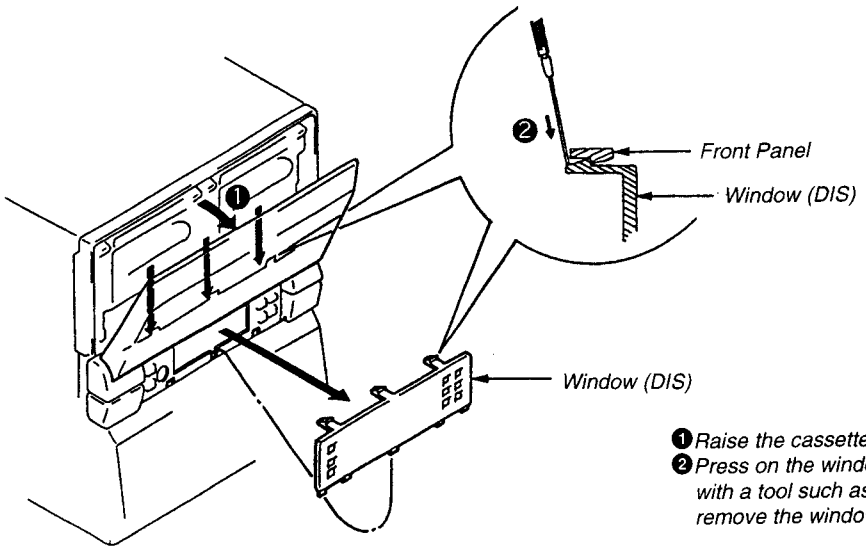
SECTION 3
DISASSEMBLY

Note : Follow the disassembly procedure in the numerical order given.

3-1. FRONT PANEL REMOVAL

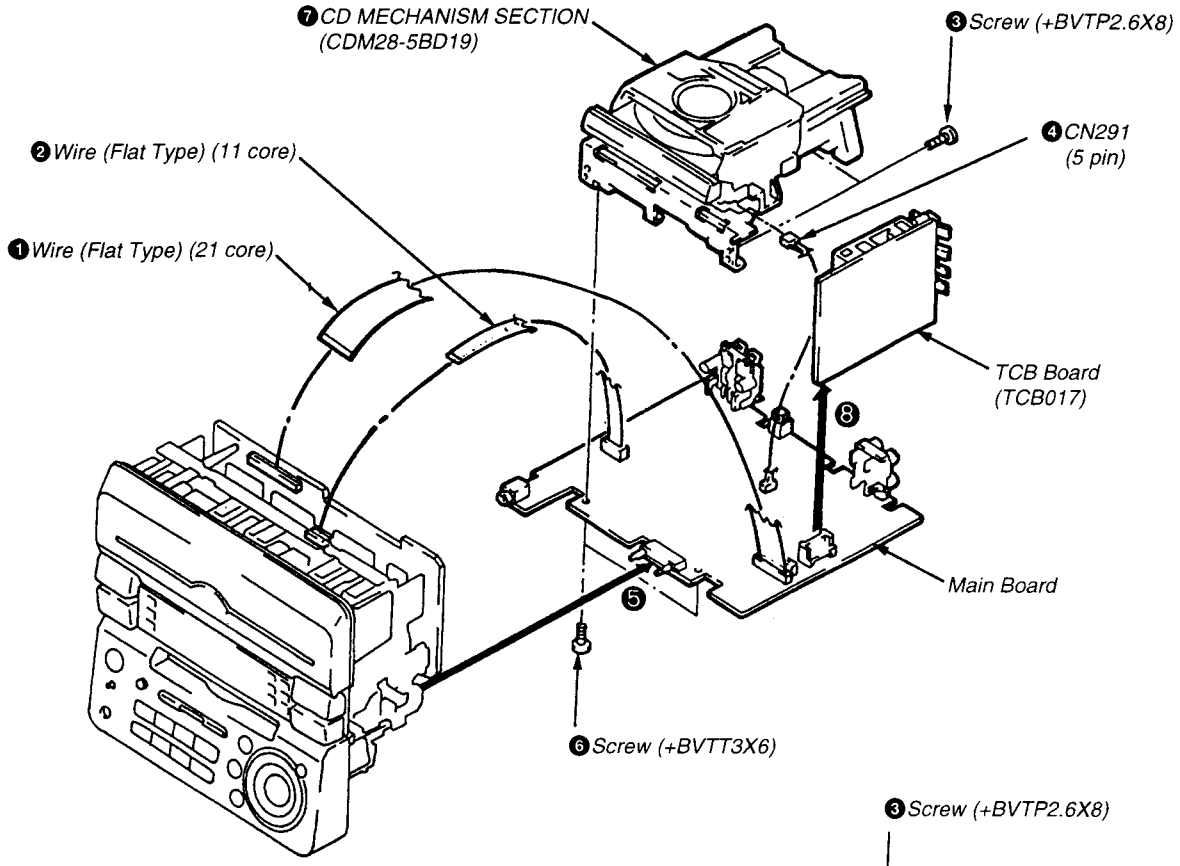


● *TO ADJUST THE AZIMUTH*

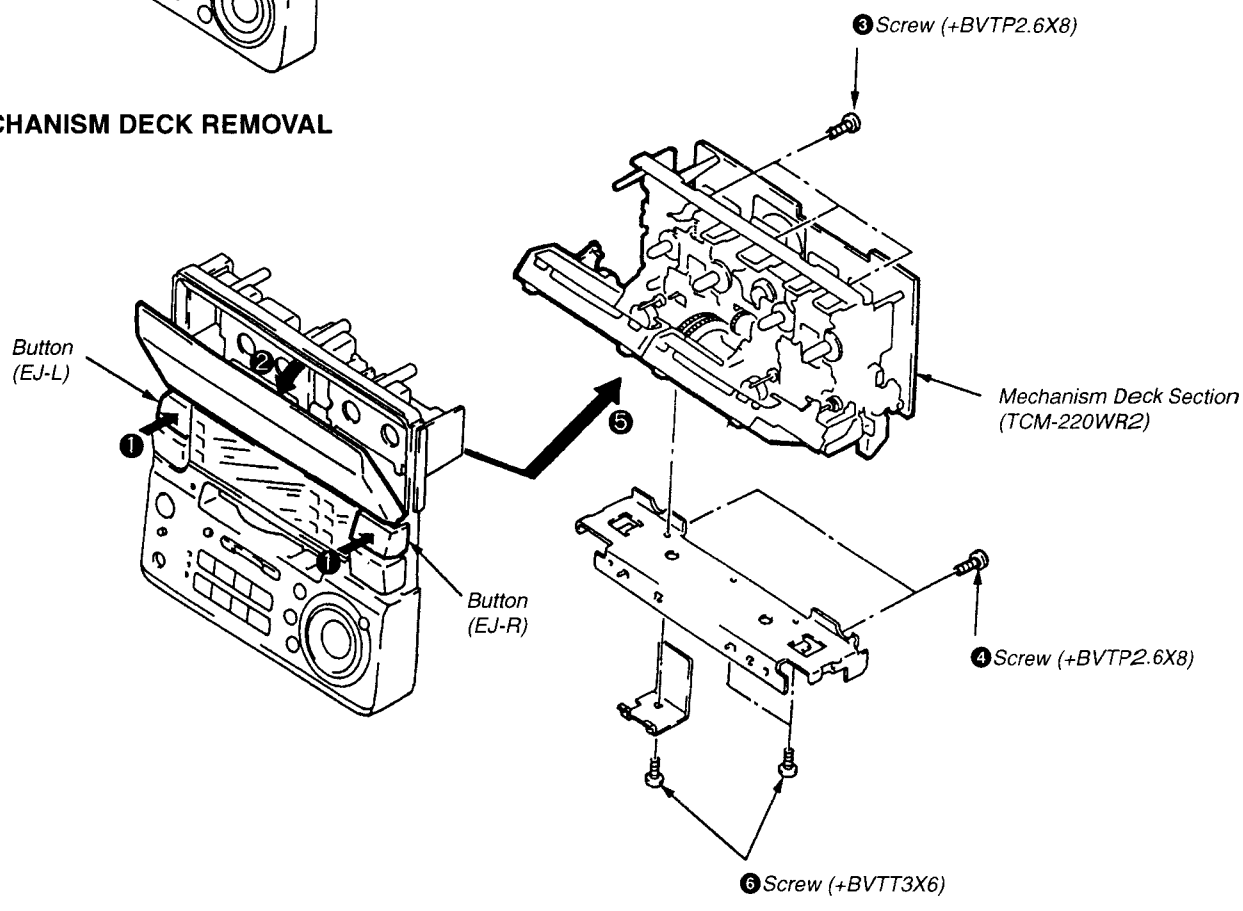


❶ *Raise the cassette lid.*
❷ *Press on the window (DIS) clips (3 locations) with a tool such as a thin screwdriver and remove the window (DIS).*

3-2. CD MECHANISM, MAIN BOARD AND TCB BOARD



3-3. MECHANISM DECK REMOVAL



SECTION 4
ADJUSTMENTS

4-1. MECHANICAL ADJUSTMENTS

PRECAUTION

1. Clean the following parts with a denatured-alcohol-moistened swab :
   record/playback head, erase head, capstan, pinch roller, rubber belts
2. Demagnetize the record/playback head with a head demagnetizer.
3. Do not use a magnetized screwdriver for the adjustments.
4. After the adjustments, apply suitable locking compound to the parts adjusted.
5. The adjustments should be performed with the rated power supply voltage unless otherwise noted.

● Torque Measurement

Mode	Torque Meter	Meter Reading
Forward	CQ-102C	36 to 61g•cm (0.50 – 0.84 oz•inch)
Forward Back Tension	CQ-102C	2 to 6g•cm (0.026 – 0.082 oz•inch)
Reverse	CQ-102RC	36 to 61g•cm (0.50 – 0.84 oz•inch)
Reverse Back Tension	CQ-102RC	2 to 6g•cm (0.026 – 0.082 oz•inch)
FF, REW	CQ-201B	61 to 143g•cm (0.85 – 1.98 oz•inch)

● Tape Tension Measurement

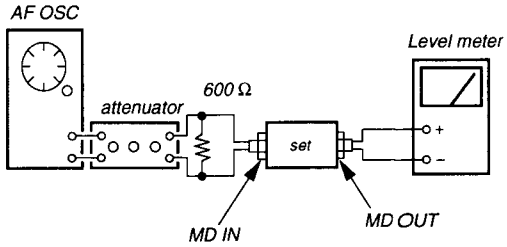
Mode	Torque Meter	Meter Reading
Forward	CQ-403A	more than 100g (3.53 oz)
Reverse	CQ-403R	more than 100g (3.53 oz)

4-2. ELECTRICAL ADJUSTMENTS

DECK SECTION

1. The adjustment should be performed in the publication. (Be sure to make playback adjustment at first.)
2. The adjustment and measurement should be performed for both L-CH and R-CH.
   ● Switch position
   DOLBY NR switch : OFF
   TIMER switch : OFF
   DIRECTION MODE switch : ⇄
3. Deck section electrical adjustment are made in test mode by pressing TUNER/BAND, DISPLAY, and FUNCTION at the same time.

– Record Mode –



●Test Tape

Tape	Contents	Use
P-4-A 100	10 kHz, –10dB	Head Azimuth Adjustment
P-4-L300	315Hz, 0dB	Level Adjustment
WS-48B	3kHz, 0dB	Tape Speed Adjustment

0dB=0.775V

Record/Playback Head Azimuth Adjustment

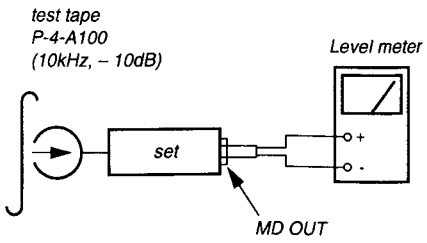
DECK A **DECK B**

● Setup for adjustment

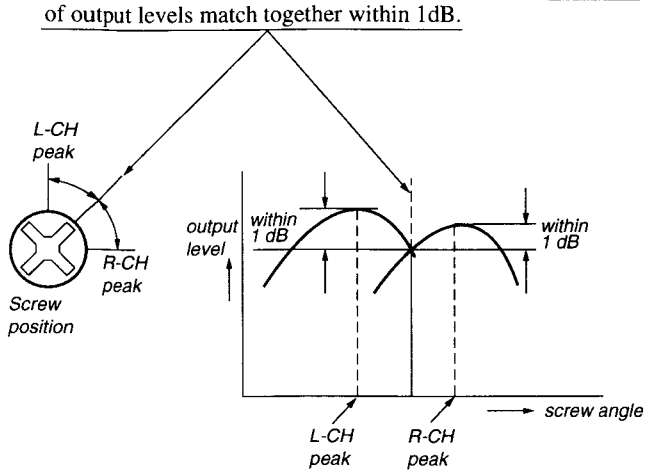
When adjusting the azimuth remove, the Window (DIS) in the center of the front panel. (Refer to page 8.)

Procedure :

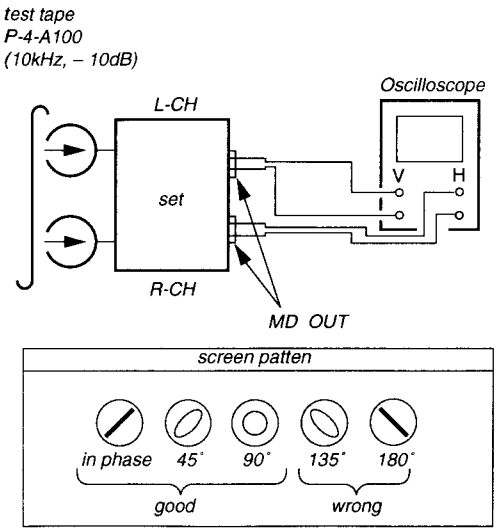
1. Forward Playback mode
   Reverse Playback mode



2. Turn the adjustment screw for the maximum output levels. If these levels do not match,turn the adjustment screw until both of output levels match together within 1dB.



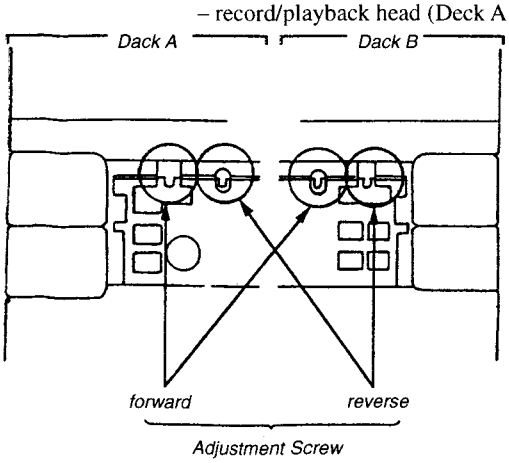
3. Playback Mode



4. Change the review playback mode and repeat the steps 1 to 3.
5. After the adjustment, lock the adjustment screw with suit able locking compound.

Adjustment Location :

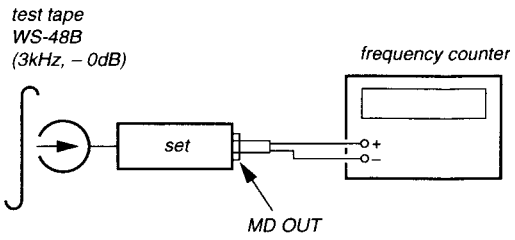
– record/playback head (Deck A and B)



Tape Speed Adjustment DECK A DECK B

Procedure :

● Perform high speed adjustment before normal speed adjustment.
Mode : Playback



Speed	Deck	Adjustment	Frequency counter
*High	A	RV652	5,970 to 6,030Hz
	B	RV652	
Normal	A	RV651	2,940 to 3,090Hz
	B	RV651	

* Continus to press HIGH SPEED DUBBING switch (S507) in playback mode : High speed palyback.

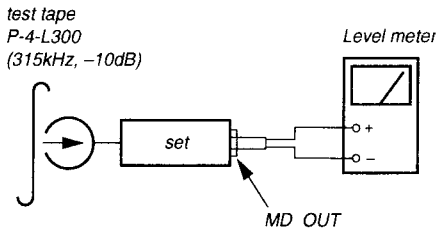
Frequency difference between the begining and the end of the tape should be within ± 3%.
Frequency difference between deck A and deck B the biginning of the tape should be within 1.5%.

Adjustment Location : AUDIO board.
(see page 12)

Playback Level Adjustment DECK A DECK B

Procedure :

Mode : Playback



Deck A is RV311 (L-CH) and RV411 (R-CH), deck B is RV301 (L-CH) and RV401 (R-CH) so that adjustment within adjustment level as follows.

Adjustment Level :

MD OUT level : – 3.5 ± 0.5dB (0.489 to 0.546V)
Level Difference between Channels : within 0.5dB

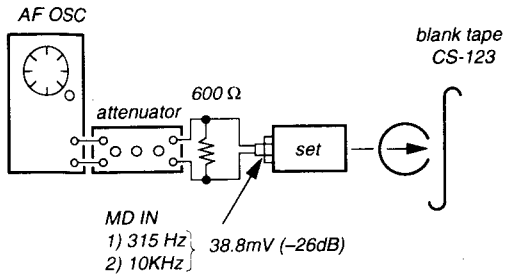
Confirm the OUT PUT level does not change in playback mode while changing the mode from playback to stop several times.

Adjustment Location : AUDIO board.
(see page 12)

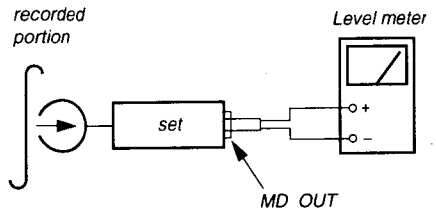
Record Bias Adjustment DECK B

Procedure :

1. Record mode



2. Playback mode



3. Confirm playback the signal recorded in step 1 become adjustment level as follows.
4. If these levels do not adjustment level, adjustment the RV341 (L-CH) and RV441 (R-CH) to repeat step 1 and 4.

Adjustment level :

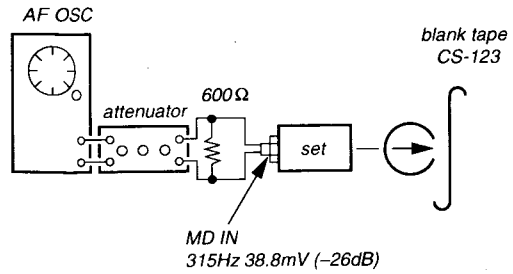
Playback output of 315Hz to playback output of 10kHz : – 0.5dB to 0.5dB. (– 1.3 to 1.3mV)

Adjustment Location : AUDIO board .

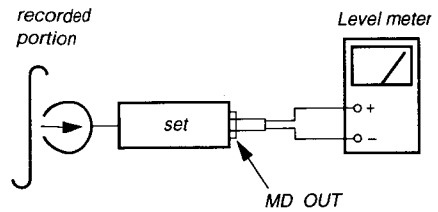
Record Level Adjustment DECK B

Procedure :

1. Record mode



2. Playback mode



3. Confirm playback the signal recorded in step become adjustment level as follows.
4. If these levels do not adjustment level, adjust the RV401 (L-CH) and RV451 (R-CH) to repeat step 1 and 4.

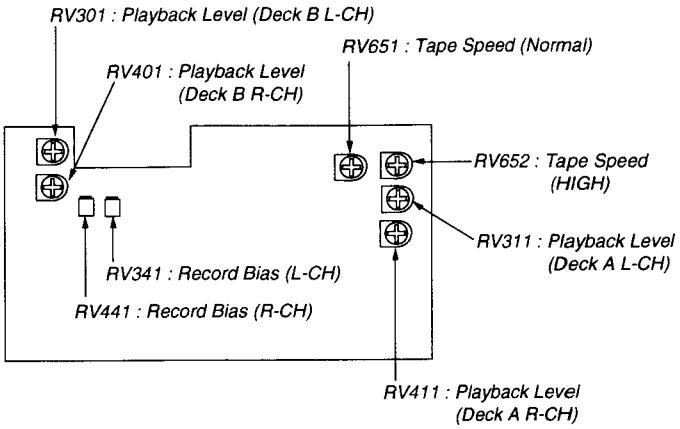
Adjustment Level :

OUT PUT level : – 28dB ± 0.5dB (29.1 to 32.7mV)

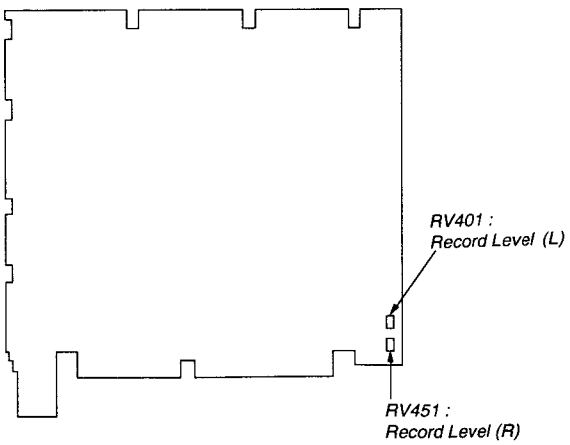
Adjustment Location : MAIN board

Adjustment Location :

[AUDIO BOARD] – Component side –


RV301 : Playback Level (Deck B L-CH)
RV651 : Tape Speed (Normal)
RV401 : Playback Level
(Deck B R-CH)
RV652 : Tape Speed
(HIGH)
RV311 : Playback Level
(Deck A L-CH)
RV341 : Record Bias (L-CH)
RV441 : Record Bias (R-CH)
RV411 : Playback Level
(Deck A R-CH)

[MAIN BOARD] – Component side –



TUNER SECTION

Precautions in Repairing

Note. 1 : The adjustment should be performed in the publication. (MW → FM → SW)

Note. 2 : As a front-end (FE1) is difficult to repair if faulty, replace it with new one.

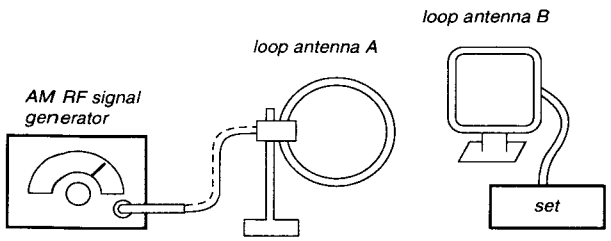
●Abbreviation

AUS	: Australian	IT	: Italian
G	: German	AR	: Argentine
EA	: Saudi Arabia	HK	: Hong Kong
MX	: Mexican.	SP	: Singapore
MY	: Malaysia	TW	: Taiwan
EE	: East European		
E2	: Tuner sections SW BAND do not exist.		
E3	: Tuner sections SW BAND exist.		

MW Tuned Indication Lighting Level

Setting :

Band : MW



Carrier frequency : 999kHz (at 9kHz step) or 1,050kHz (at 10kHz step)
Modulation : 400Hz 30% modulation

Procedure :

1. Set loop antenna A so that the loop antenna B input level becomes 55dBμ/m (0.6mV/m)
2. Tune the set to 999kHz (at 9kHz step) or 1,050kHz (at 10kHz step).
3. Adjust RV41 so that the TUNED indicatior goes on.

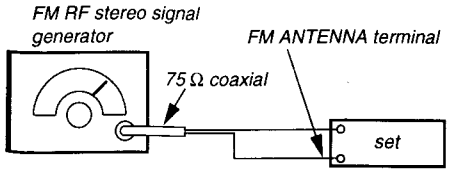
Adjustment Location : TCB board (see page 14)

FM Tuned Indication Lighting Level

Note : Always make the tuning level adjustment first. (Since it affects the FM tuning level.)

Setting :

Band : FW



Carrier frequency : 98MHz
Modulation : 1kHz, 75kHz (100%)
Output level : 0.018mV (25dBμ)

Procedure :

1. Tune the set to 98MHz.
2. Adjust RV42 so that the TUNED indicator goes on.

Adjustment Location : TCB board (see page 14)

SW Control Voltage Adjustment (Frequency Coverge Adjustment) (E3,EA,MY,SP,HK,TW model)

Setting :

Band : SW

Procedure :

1. Connect digital Voltmeter to diode D1 center lead and ground.
2. Adjust for a following value reading on digital Voltmeter.

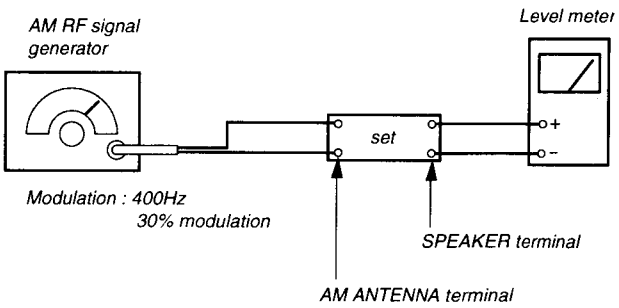
	Set frequency	Adjustment part	Reading on digital voltmeter
SW	5.95MHz	T2	1.2Vdc
	17.9MHz	CV2	8.5Vdc

Adjustment Location : TCB board (see page 14)

SW Tracking Adjustment (E3,EA,MY,SP,HK,TW model)

Setting :

Band : SW



Procedure :

Adjust for maximum reading on Level mater.

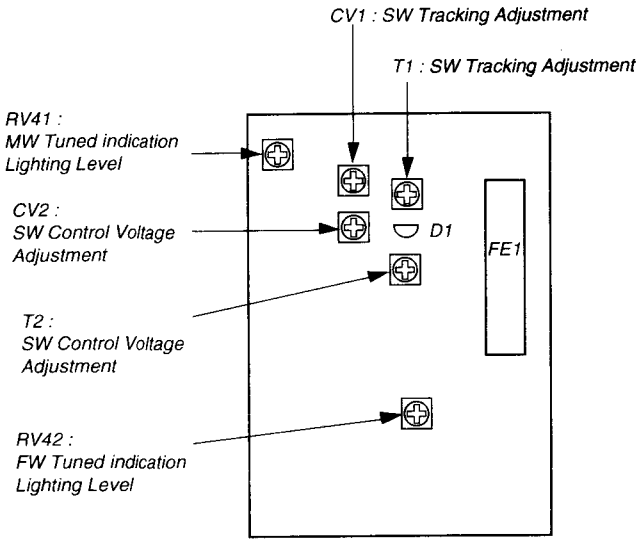
	Set frequency	Adjustment part
SW	7MHz	T1
	17MHz	CV1

● Repeat the procedures is each adjustment several times, and the frequency coverage and tracking adjustment should be finally done by the trimmer capacitors.

Adjustment Location : TCB board (see page 14)

Adjustment Location

[TCB BOARD] – Conductor side –



CD SECTION

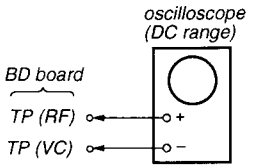
Note :

1. CD Block basically constructed to operate without adjustment. Therefore, check each item in order given.
2. Use YEDS-18 disc (3-702-101-01) unless otherwise indicated.
3. Use the oscilloscope with more than 10MΩ impedance.
4. Clean an object lens by an applicator with neutral detergent when the signal level is low than specified value with the following checks.

Focus Bias Adjustment

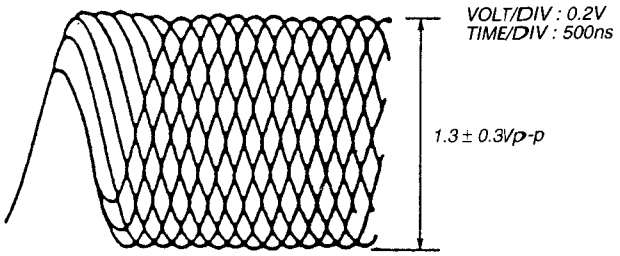
This adjustment is to be done when the optical block is replaced.

Adjustment procedure :



1. Connect oscilloscope to test point TP (VC) and TP (RF) on BD board.
2. Ground main board IC101 (pin⑨③) with the lead wire.
3. Turned power switch ON. (Stop mode)
4. Put disc (YEDS-18) in and press the ► button.
5. Press the ❚❚ button. (Tracking servo ON)
6. Adjust RV101 so that the oscilloscope waveform is as shown in the figure below (eye pattern).
   A good eye pattern means that the diamond shape (◊) in the center of the waveform can be clearly distinguished.
7. After adjustment, remove the lead wire connecd in step 2.

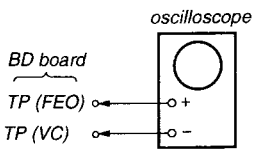
● RF signal reference waveform (eye pattern)



When observing the eye pattern, set the oscilloscope for AC range and raise vertical sensitivity.

Adjustment Location : BD board. (see page 15)

S-Curve Check

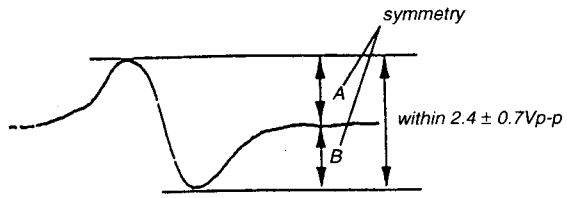


Procedure :

1. Connect oscilloscope to test point TP (FEO) and BD board.
2. Connect between test point TP (FOK) and TP (GND) by lead wire.
3. Turned Power switch on.

4. Put disc (YEDS-18) in and turned Power switch on again and actuate the focus search. (actuate the focus search when disc table is moving in and out.)
5. Check the oscilloscope waveform (S-curve) is symmetrical between A and B. And confirm peak to peak level within 2.4±0.7Vp-p.

S-curve waveform

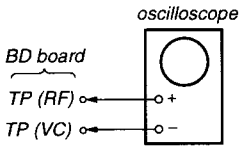


6. After check, remove the lead wire connected in step 2.

Note : ●Try to measure several times to make sure that the ratio of A : B or B : A is more than 10 : 7.
●Take sweep time as long as possible and light up the brighness to obtain best waveform.

Adjustment Location : BD board. (see page 15)

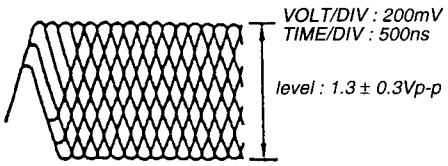
RF Level Check



Procedure :
1. Connect oscilloscope to test point TP (RF) on BD board.
2. Turned Power switch on.
3. Put disc (YEDS-18) in and press the ► button.
4. Confirm that oscilloscope waveform is clear and check RF signal level is correct or not.

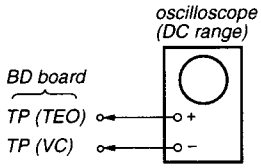
Note :
Clear RF signal waveform means that the shape " ◊ " can be clearly distinguished at the center of the waveform.

RF signal waveform



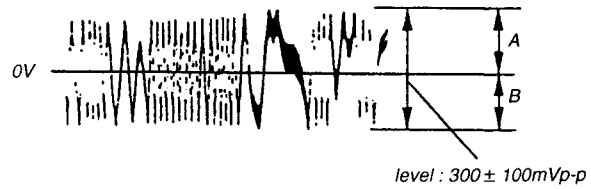
Adjustment Location : BD board. (see page 15)

E-F Balance Check



Procedure :
1. Ground main board IC101 (pin ⑨③) with the lead wire.
2. Connect oscilloscope to test point TP (TEO) on BD board.
3. Turned Power switch on.
4. Put disc (YEDS-18) in and press the ► button.
5. Confirm that the osilloscope waveform is symmetrical on the top and bottom in relation to 0V, and check this level.

Traverse waveform



specified value : ● $\frac{A-B}{2(A+B)}$ X100 = less than ± 7%
● A+B = 300 ± 100mVp-p

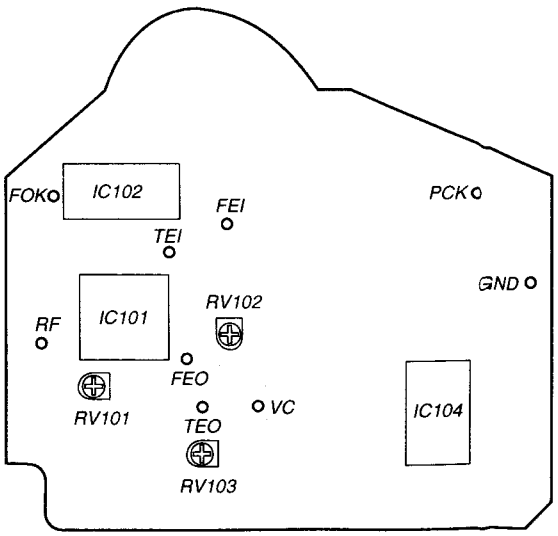
6. Remove the lead wire connected in step 1.

Focus/Tracking Gain Adjustment (RV102, RV103)

This gain has a margin, so even if it is slightly off. There is no problem.
Therefore, do not perform, this adjustment.
Please note that it should be fixed to mechanical center position when you moved and do not know original position.

Adjustment Location :

[BD BOARD] – Conductor side –



SECTION 5
EXPLANATION OF IC TERMINALS

IC101 TMP87CP64YF - 6335 (MASTER CONTROL)

Pin No.	Pin name	I/O	Description
1	Vss	–	Ground
2	X OUT	O	Main system clock. (10MHz)
3	X IN	I	
4	$\overline{\text{RESET}}$	I	Reset signal input terminal.
5	X OUT	O	Sub system clock.(32kHz).
6	X IN	I	
7	GND	–	Ground.
8	$\overline{\text{BACK UP}}$	I	BACK-UP mode input terminal.
9	COUNT SW	–	Not used. (Ground)
10	INIT SW	–	Not used. (Ground)
11	DISC SENS	–	Not used. (Ground)
12	MID SENS	–	Not used. (Ground)
13	CD XRST	O	CD Reset output. "L" : RESET
14	POWER	O	Power on output. "L" : ON
15	MUTE	O	Mute output. "L" : MUTE
16	MPX	–	Not used. (Open)
17	KEYCON LATCH	–	Not used. (Open)
18	VOL LATCH	O	Latch output to volume control. (TC9210P)
19	ST MUTE	–	Not used. (Open)
20	ST FM	–	Not used. (Open)
21	FUNC A	O	Function Select.
22	FUNC B	O	
23	FUNC C	O	
24	GEQ.LATCH	O	Latch output to gray control. (M6243FP)
25	RDS. INT	I	Not used. (+5V)
26	SCOR (DSP)	I	Sub code sync SO+SI detection input from DSP. (CXD2507AQ)
27	CIN / SENS	I	SENS input from DSP. (CXD2507AQ)
28	CD POWER	O	Power on output. "H" : ON
29	CDG LATCH	–	Not used. (Open)
30	DBFB- 2	–	Not used. (Open)
31	MUTE	–	Not used. (Open)
32	CE	O	Chip enable output to tuner PLL IC. (LC72130)
33	STEREO	I	FM/AM Stereo identification. "L" : STEREO
34	TUNED	I	FM/AM Tuning identification. "L" : TUNING
35	SQ-RDS-CLK	O	Sub-code Q data scanning clock output to DSP (CXD2507AQ), RDS clock output.
36	SQ-RDS-DI	I	Sub-code Q data input from DSP (CXD2507AQ), RDS data input.
37	RDS-RESET	–	Not used. (Open)
38	CLK	O	System clock output.
39	D. IN	I	Serial data input from tuner.
40	D. OUT	O	Serial data (COMN) output.

FUNCTION	FUNC A	FUNC B	FUNC C
ST	L	L	H
CD	L	H	H
TC	H	L	H
MD	H	H	L

Pin No.	Pin name	I/O	Description
41	CDG MUTE	–	Not used. (Open)
42	REQ GM	I	Data transmission request input from system control.
43	MREQ	O	Not used. (+5V)
44	CLK MG	O	Clock output for communications with system control.
45	D. GM	I	Serial data input from system control.
46	D. MG	O	Serial data output to system control.
47	RDY	I/O	System control Ready signal input / output. "L" : READY
48	VAREF	–	Power supply. (+5V)
49	VASS	–	Ground
50	Vss	–	Ground
51	VDD	–	Power supply. (+5V)
52	URGENT. SIG	I	Not used. (+5V)
53	URGENT. STBY	I	Not used. (Open)
54	BUG Y/$\overline{N}$	–	Not used. (Ground Connected)
55	ADJUSTOR	–	Not used. ("H" LEVEL)
56	ADJUST2	–	Not used. ("H" LEVEL)
57	MAGIC SPEED	–	Not used. ("H" LEVEL)
58	SPEC	I	Not used. ("H" LEVEL)
59	DIST	I	Model Select input . (A/D Converter)
60	SPEED	–	Not used. ("H" LEVEL)
61	BREAK	–	Not used. ("H" LEVEL)
62	B-PLAY	I	Deck-B PLAY Switch input. "H" : PLAY
63	B-SHUT	I	Deck-B Reel table signal input.
64	B-HALF	I	Deck-B Record prevention claw A, B detection input.
65	A-SHUT	I	Deck-A Reel table signal input.
66	A-PLAY	I	Deck-A PLAY Switch input. "H" : PLAY
67	A-HALF	I	Deck-A HALF SW input.
68	CAPM H/L	O	Capstan motor speed selector. "H" : Normal speed "L" : High speed
69	CAPM ON/OFF	O	Capstan motor ON/OFF. "L" : ON
70	TRIG H/L	O	Trigger motor control output.
71	B TRG	O	
72	A TRG	O	
73	RELAY	O	Control output to REC/PB select switch. (IC602)
74	A/B	O	Dolby IC PB input Deck A/B select output. "L" : A, "H" : B
75	NORM/HIGH	O	EQ Select switch output for normal / high speed. "H" : High speed
76	BIAS ON/OFF	O	BIAS Oscillation ON/OFF control. "H" : ON
77	RM ON/OFF	O	REC Mute output. "L" : MUTE
78	REC/PB	O	DOLBY IC REC/PLAY Select output. "H" : REC
79	NR	O	DOLBY ON/OFF Control output. "H" : ON
80	LM	O	LINE Mute output. "L" : MUTE
81	PASS	O	PASS Amplifier switch output to DOLBY IC. (IC401)
82	CMD2	–	Not used. (Open)
83	UP MOTOR	–	Not used. (Open)
84	DOWN MOTOR	–	Not used. (Open)
85	TABLE R	–	Not used. (Open)

Pin No.	Pin name	I/O	Description
86	TABLE L	–	Not used. (Open)
87	LOAD OUT	O	Loading motor (M903) Load out output.
88	LOAD IN	O	Loading motor (M903) Load in output.
89	DF-LATCH	O	Latch output to digital filter. (PCM1701U)
90	XLT	O	Serial data latch output to DSP. (CDX2507AQ)
91	FOCUS SW	O	High-region gain down output to focus servo. (CXA1782BQ)
92	HIGH DUBB	–	Not used. ("H" LEVEL)
93	TEST 1	–	Not used. ("H" LEVEL)
94	OUT SW	I	CD Tray output detection input.
95	IN SW	I	CD Tray input detection terminal.
96	UP SW	–	Not used. (Ground)
97	PANEL SW	–	Not used. (Ground)
98	CLOSE SW	–	Not used. (Ground)
99	OPEN SW	–	Not used. (Ground)
100	VDD	–	Power supply. (+5V)

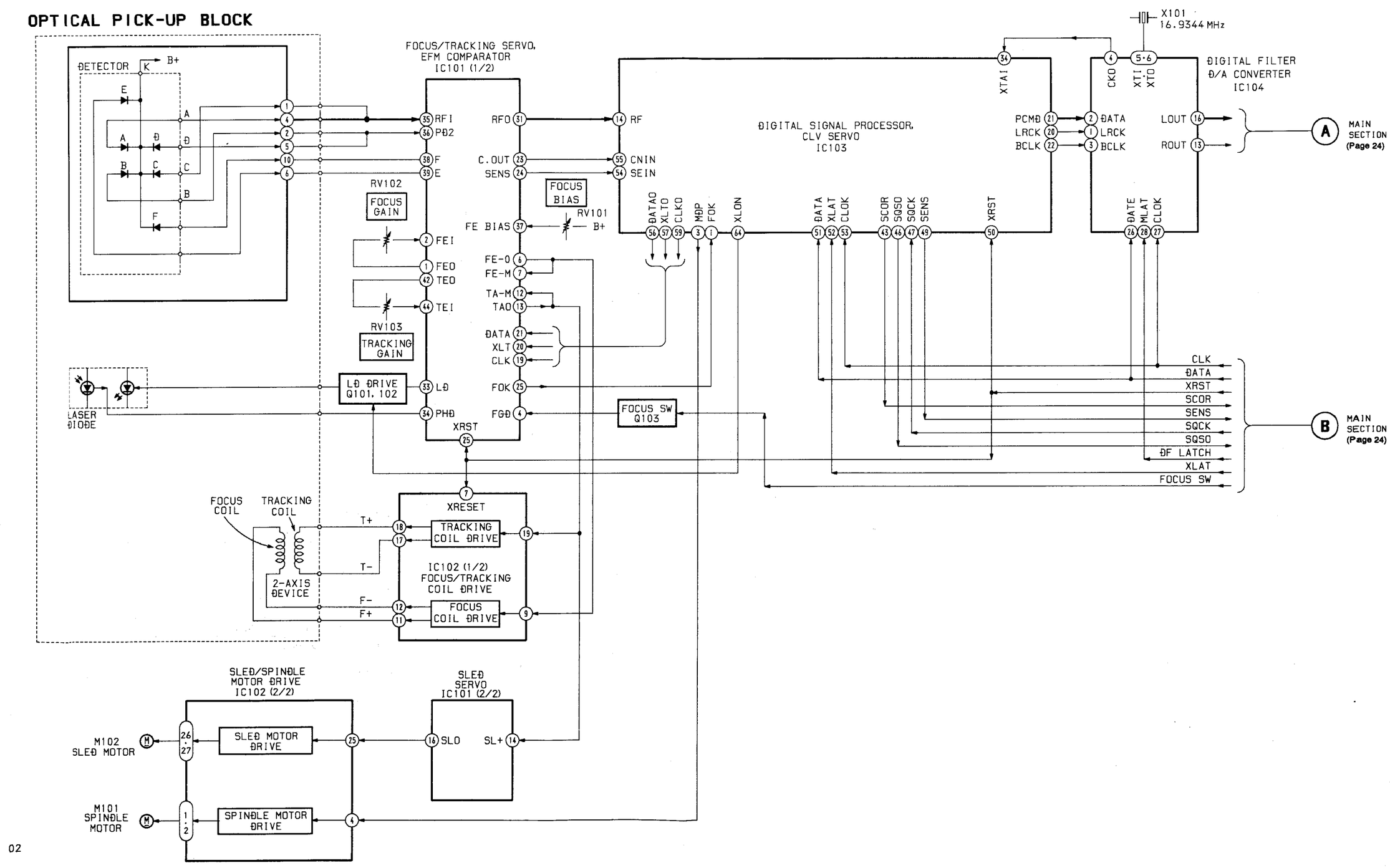
IC501 CXP82612-016Q (SYSTEM CONTROL DRIVE)

Pin No.	Pin name	I/O	Description
1	ENC	I	Volume encoder input terminal.
2	SIRCS	I	Remote commander signal input.
3	REQ. MG	I	Data transmission request input from master control.
4	REQ. GM	O	Data transmission request output to master control.
5	LED1	O	LED DRIVE Output.
6	LED2	–	Not used. (Open)
7	LED3	–	Not used. (Open)
8	LED4	–	Not used. (Open)
9	LED5	O	PLAY, PAUSE LED Output.
10	RDY	I/O	Master control Ready signal input / output. "L" : Ready
11	SCK. IN	I	Clock output for communications with master control.
12	SD. IN	I	Serial data input from master control.
13	SD. OUT	O	Serial data output to master control.
14	LED-PAUSE	O	REC, PAUSE LED Output.
15	LED-CD	O	ROCK LED Output.
16	LED-TUNER/BAND	O	JAZZ, DRECTION MODE LED Output
17	LED-TAPE	O	CLASSIC, DANCE LED Output.
18	LED-FWD,STOP,FF&REW	O	TUNER LED Output.
19	LED-DECK A/B & REV	O	CD, TIMER LED Output.
20	LED-A	O	ENTER / NEXT, TUNER / BAND LED Output.
21	LED-B	O	A, B LED Output.
22	KEY1	I	Key input. (A/D Converter)
23	KEY2	I	
24	KEY3	I	
25	KEY4	I	
26	PBF1	I	Not used. (Ground)
27	PBF2	I	
28	PBF3	I	
29	PBF4	I	
30	RST	I	Reset signal input terminal.
31	X IN	I	system clock. (4MHz)
32	X OUT	O	
33	Vss	–	Gound
34	P29	O	LED Drive.
35	P28	O	
36	P27	O	
37	P26	O	
38	P25	O	
39	P24	O	
40	P23	O	
41	P22	O	
42	P21	O	
43	P20	O	
44	P19	O	

Pin No.	Pin name	I/O	Description
45	P18	O	LED Drive.
46	P17	O	
47	P16	O	
48	P15	O	
49	P14	O	
50	P13	O	
51	P12	O	
52	P11	O	
53	P10	O	
54	P9	O	
55	P8	O	
56	P7	O	
57	P6	O	
58	P5	O	
59	P4	O	
60	P3	O	
61	P2	O	
62	P1	O	
63	7G	O	
64	6G	O	
65	5G	O	
66	4G	O	
67	3G	O	
68	2G	O	
69	1G	O	
70	NC	–	Not used. (Open)
71	VFDP	–	LED Drive – 25V power supply.
72	V_{DD}	–	Power supply. (+5V)
73	KEY	–	Not used. (+5V)
74	KEY	–	Not used. (+5V)
75	V_{DD} (TEST)	–	Not used. (+5V)
76	LED-TUNER-COMMON	O	Forward play, Revers play LED output.
77	LED-ENTER-NEXT	O	ENTER / NEXT LED Output.
78	ENC B	I	AMS ENCODER input terminal.
79	ENC A	I	
80	ENC	–	Not used. (+5V)

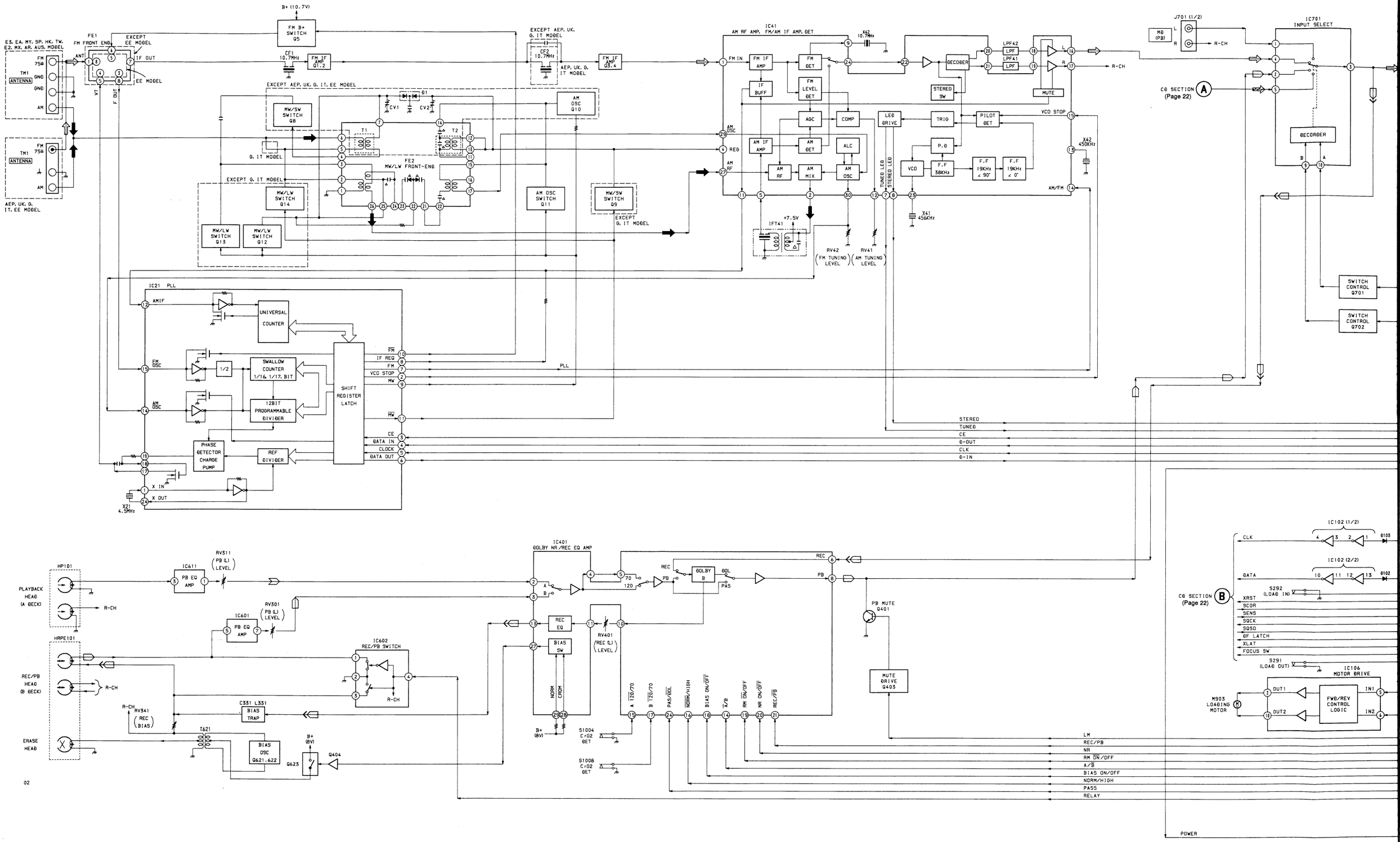
SECTION 6
DIAGRAMS

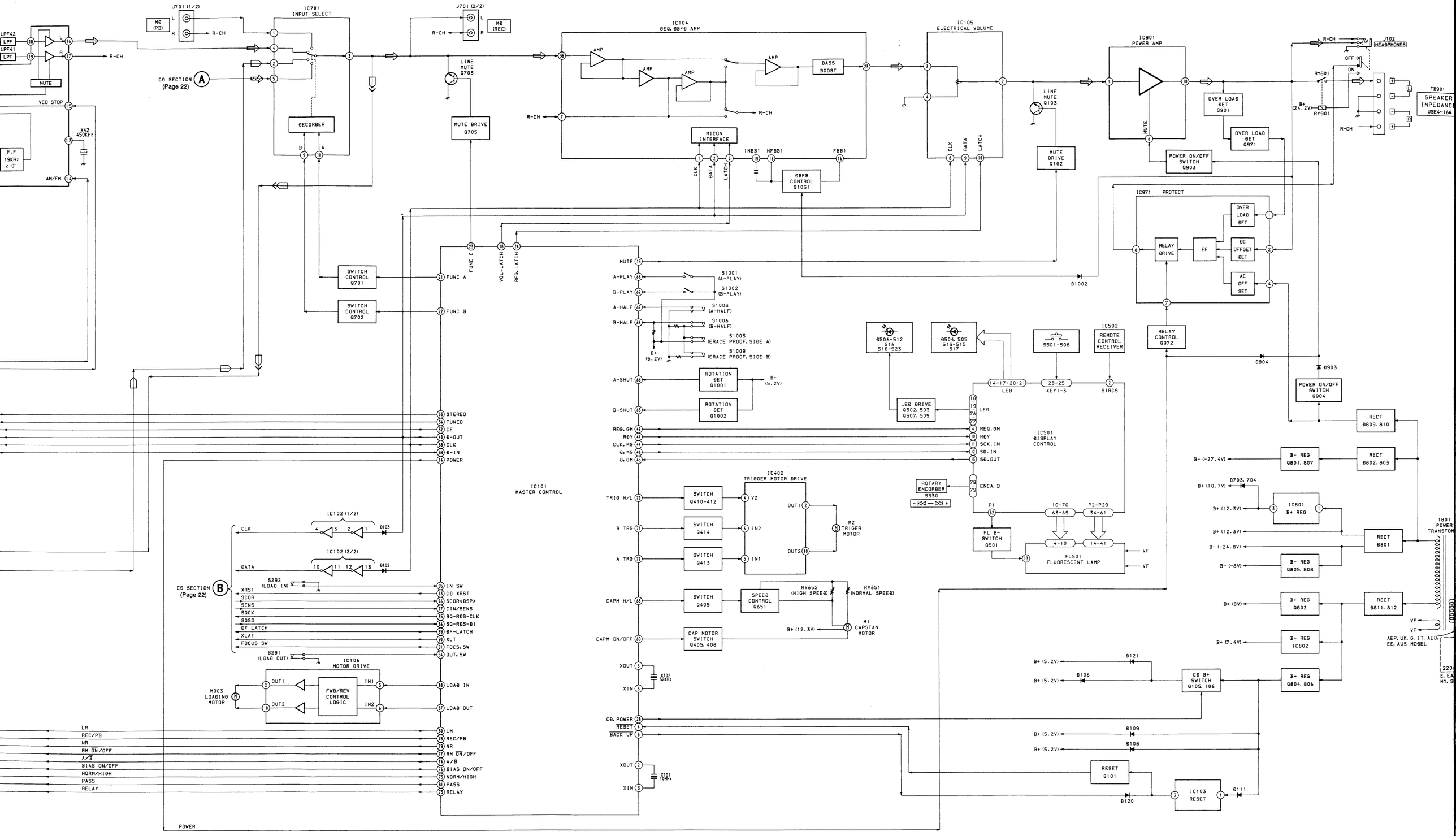
6-1. BLOCK DIAGRAM – CD SECTION –

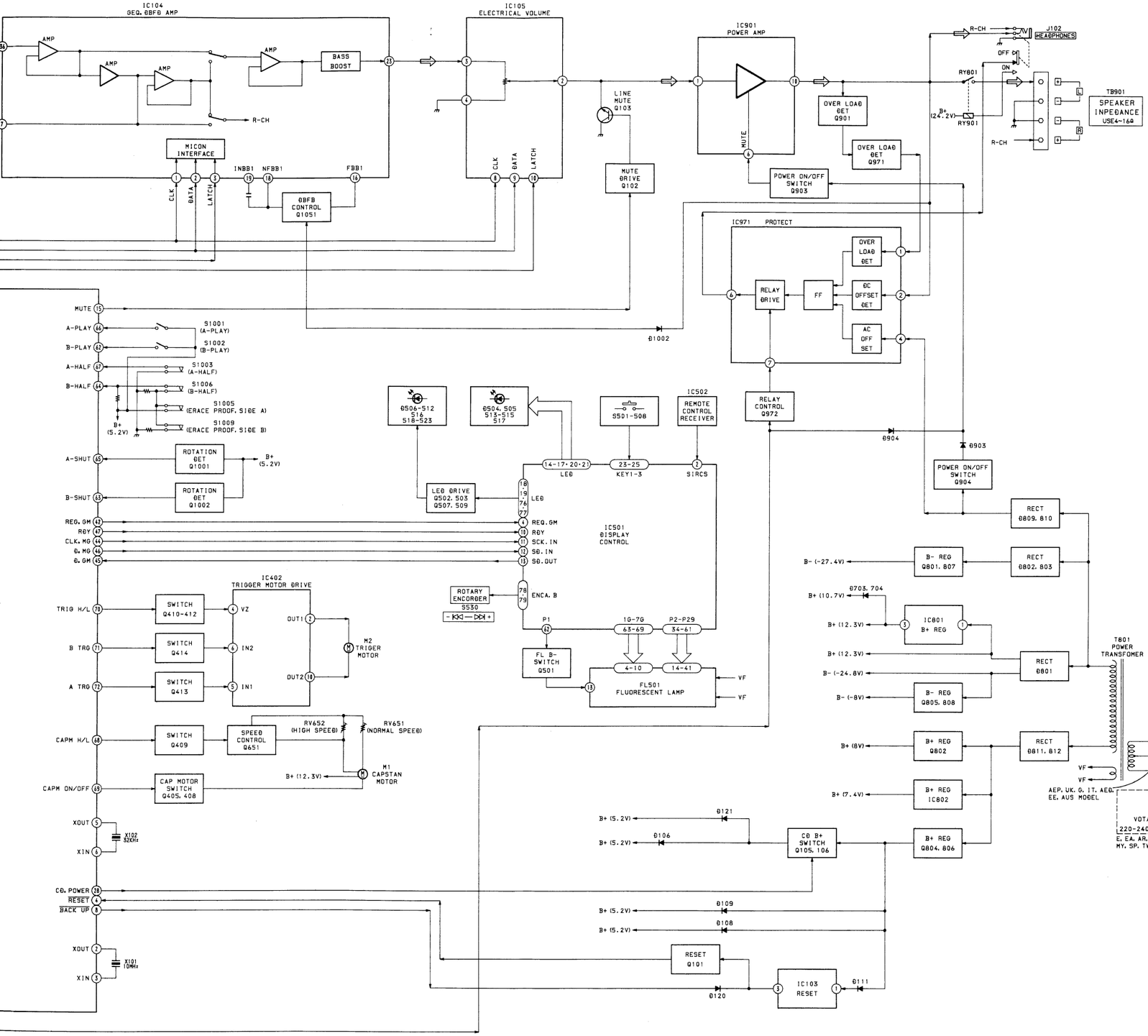


02

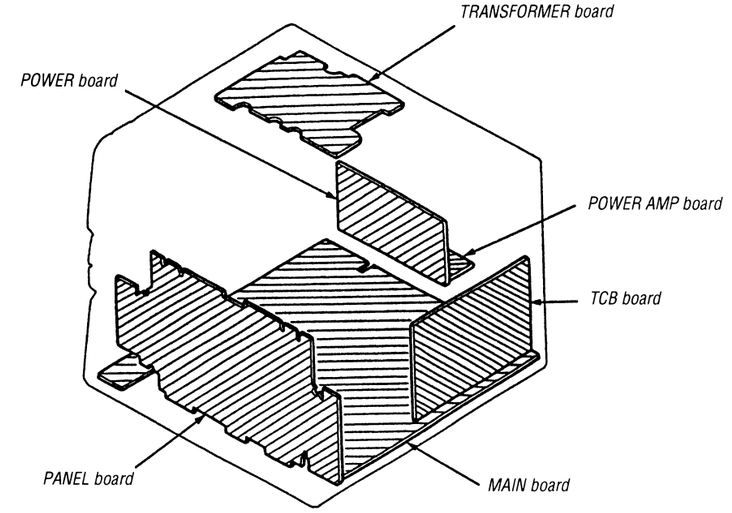
6-2. BLOCK DIAGRAM – MAIN SECTION –

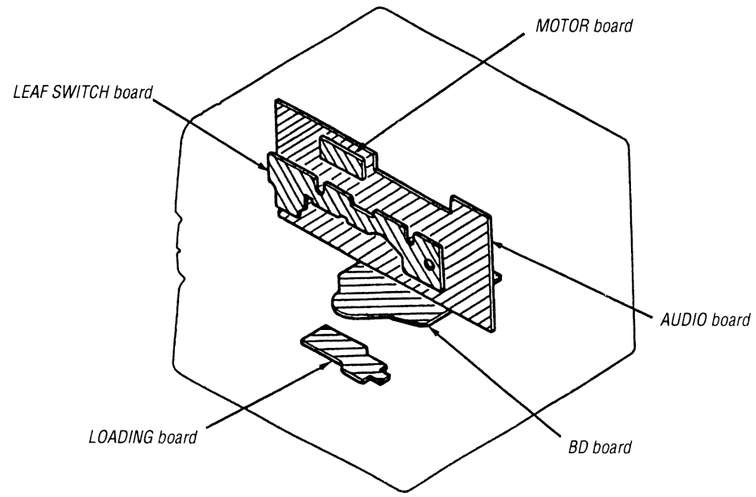



J701 (1/2)
MD (PB)
R-CH
IC701 INPUT SELECT
J701 (2/2)
MD (REC)
LINE MUTE Q703
IC104 GEQ. 8BFB AMP
IC105 ELECTRICAL VOLUME
IC901 POWER AMP
J102 HEADPHONES
TB901 SPEAKER INPEDANCE USE 4~16Ω
LPF42
LPF41
LPF
MUTE
VCO STOP
X42 450KHz
F.F 19KHz ∠ 0°
AM/FM
CB SECTION (Page 22)
DECORDER
MICON INTERFACE
8BFB CONTROL Q1051
LINE MUTE Q103
MUTE DRIVE Q102
OVER LOAD DET Q901
OVER LOAD DET Q971
POWER ON/OFF SWITCH Q903
RY801
RY901
IC971 PROTECT
OVER LOAD DET
DC OFFSET DET
AC OFF SET
RELAY DRIVE
FF
RELAY CONTROL Q972
D1002
D904
D903
POWER ON/OFF SWITCH Q904
SWITCH CONTROL Q701
SWITCH CONTROL Q702
FUNC A
FUNC B
FUNC C
VOL-LATCH
REG-LATCH
MUTE
A-PLAY
B-PLAY
A-HALF
B-HALF
S1001 (A-PLAY)
S1002 (B-PLAY)
S1003 (A-HALF)
S1006 (B-HALF)
S1005 (ERACE PROOF. SIDE A)
S1009 (ERACE PROOF. SIDE B)
B+ (5.2V)
A-SHUT
B-SHUT
ROTATION DET Q1001
ROTATION DET Q1002
D506-512 516 518-523
D504, 505 513-515 517
S501-508
IC502 REMOTE CONTROL RECEIVER
14-17-20-21 LED
23-25 KEY1-3
SIRCS
LED DRIVE Q502, 503 Q507, 509
IC501 DISPLAY CONTROL
REG.GM
RDY
SCK.IN
SO.IN
SO.OUT
ROTARY ENCORDER S550
ENCA. B
P1
FL B- SWITCH Q501
1G-7G 63-69
P2-P29 34-61
4-10
14-41
FLS01 FLUORESCENT LAMP
VF
RECT D809, 810
B- REG Q801, 807
RECT D802, 803
B- (-27.4V)
D703, 704
B+ (10.7V)
IC801 B+ REG
B+ (12.3V)
RECT D801
B- (-24.8V)
B- REG Q805, 808
B- (-8V)
B+ REG Q802
RECT D811, 812
B+ (8V)
B+ REG IC802
B+ (7.4V)
B+ REG Q804, 806
T801 POWER TRANSFORMER
AEP, UK, G, IT, AED, EE, AUS MODEL
D121
D106
CD B+ SWITCH Q105, 106
D109
D108
RESET Q101
D120
IC103 RESET
D111
IC101 MASTER CONTROL
IC102 (1/2)
IC102 (2/2)
CLK
DATA
D103
D102
CD SECTION (Page 22)
S292 (LOAD IN)
S291 (LOAD OUT)
XRST
SCOR
SENS
SQCK
SQSO
DF LATCH
XLAT
FOCUS SW
IN SW
CD XRST
SCOR<GSP>
CIN/SENS
SQ-RDS-CLK
SQ-RDS-DI
DF-LATCH
XLT
FOCS. SW
OUT. SW
IC106 MOTOR DRIVE
FWD/REV CONTROL LOGIC
M903 LOADING MOTOR
LOAD IN
LOAD OUT
LM
REC/PB
NR
RM ON/OFF
A/B
BIAS ON/OFF
NORM/HIGH
PASS
RELAY
IC402 TRIGGER MOTOR DRIVE
TRIG H/L
B TRG
A TRG
CAPM H/L
CAPM ON/OFF
SWITCH Q410-412
SWITCH Q414
SWITCH Q413
SWITCH Q409
CAP MOTOR SWITCH Q405, 408
SPEED CONTROL Q651
RV652 (HIGH SPEED)
RV651 (NORMAL SPEED)
M2 TRIGER MOTOR
M1 CAPSTAN MOTOR
XOUT
XIN
X102 32KHz
X101 10MHz
CD. POWER
RESET
BACK UP
POWER



6-3. CIRCUIT BOARD LOCATION





- Signal path.
  - : FM
  - : AM
  - : CD
  - : PB (DECK A)
  - : PB (DECK B)
  - : REC (DECK B)

6-4. SCHEMATIC DIAGRAM – MAIN SECTION –

● Refer to page 42 for IC Block Diagrams.

【MAIN BOARD】

IC401 ØDLBY NR REC EQ AMP

IC401 HA12195NT

IC402 TRIGGER MOTOR ØRIVE

IC102 BUFFER

IC106 MOTOR ØRIVER

【LOADING BOARD】

IC104 GEQ. ØBFB AMP

M62423FP

IC105 ELECTRICAL VOLUME TC9210P

Q103, 104 LINE MUTE

Q102 2SA1348 MUTE ØRIVE

Q971 2SA1346 OVER LOARØ ØET

IC971 ⊭PC1237HA IC971 PROTECT

Q972 RELAY CONTROL

IC101 TMP87CP64YF MASTER CONTROL

ØESTINATION	R171	R172
E2, MX, AR	22k	10k
AEØ, UK, AEP	10k	22k
E3, MY, SP, HK	15k	3.3k
EA, TW	10k	3.3k
AU	15k	10k
G	10k	10k
IT	10k	15k
EE	3.3k	15k

IC103 PST600E RESET

Q101 2SC2603 RESET

IC701 MC14052BCP INPUT SELECT

Q701, 702 SWITCH CONTROL

Q705 MUTE ØRIVE

Q703, 704 REC MUTE

FUNCTION CONTROL

FUNCTION	MC14052		MUTE
	FUNC. A	FUNC. B	FUNC. C
ST	L	L	H
CØ	L	H	H
TC	H	L	H
MØ/AUX	H	H	L

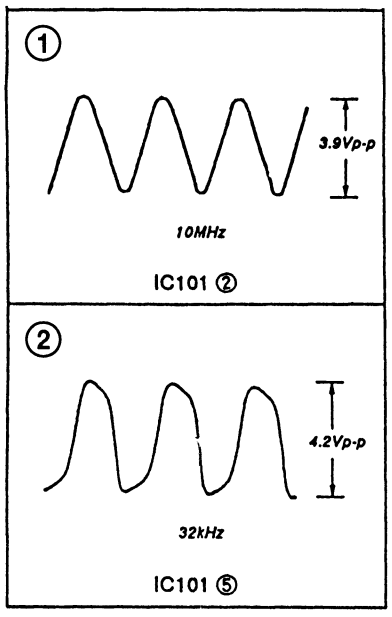
【POWER AMP BOARD (1/3)】

IC901 POWER AMP STK4122MK

CN105 16P B-B

CN104 17P 1.25FFC

• WAVEFORMS – MAIN SECTION –



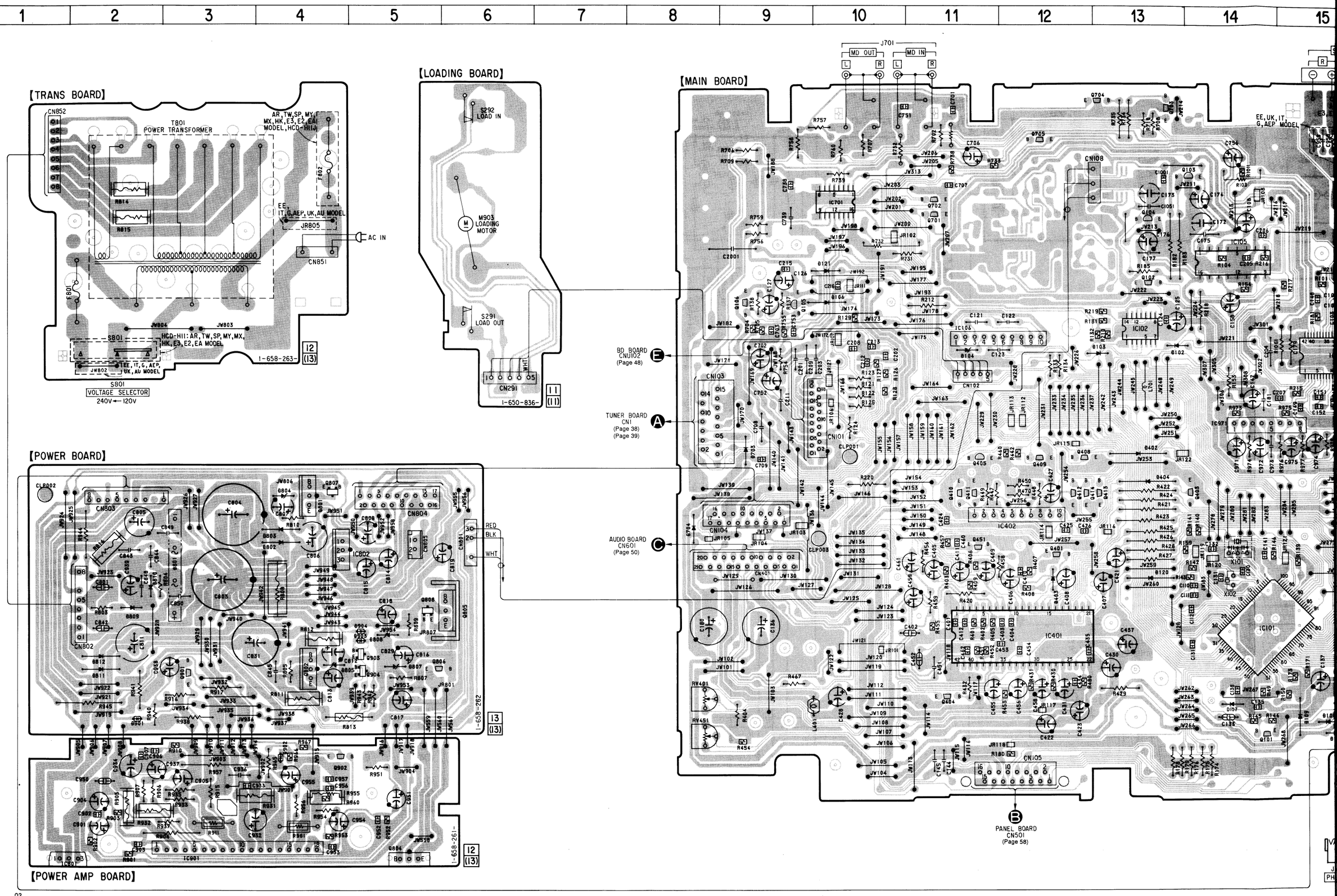
Note :

- All capacitors are in μF unless otherwise noted. pF: μμF 50WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and 1/4 W or less unless otherwise specified.
- △ : internal component.
- : nonflammable resistor.
- : fusible resistor.

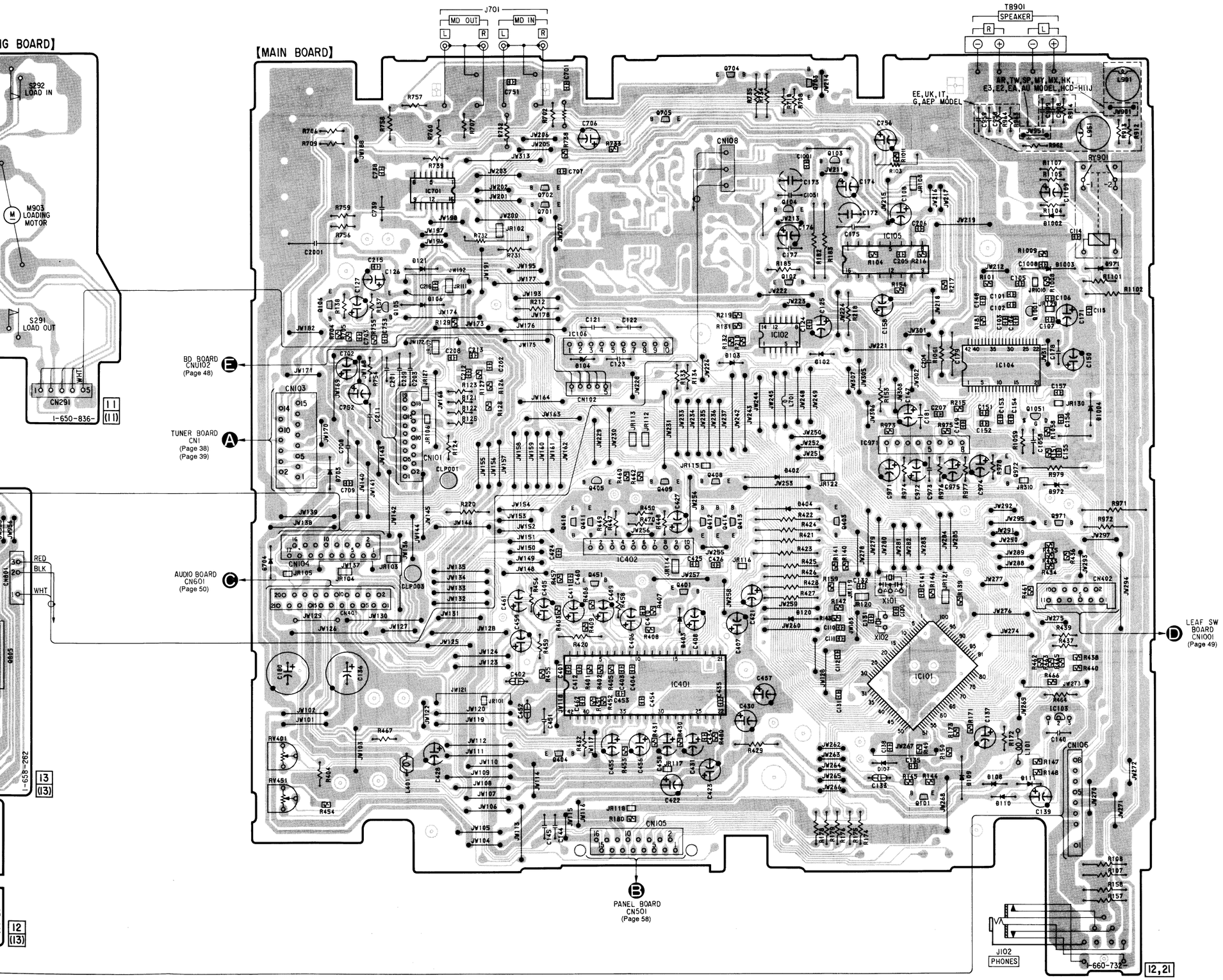
Note : The compons identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

- B+ : B+ Line
- B– : B– Line
- : adjustment for repair.
- Voltage and waveforms are dc with respect to ground under no-signal (detuned) conditions.
  no mark : FM no mark : PLAY (Tape section)
  ( ) : REC
- Voltages are taken with a VOM (Input impedance 10MΩ). Voltage variations may be noted due to normal production tolerances.
- Waveforms are taken with a oscilloscope. Voltage variations may be noted due to normal production tolerances.

- Circled numbers refer to waveforms.
- Signal path.
  : FM : PB (DECK A)
  : CD : PB (DECK B)
  : REC (DECK B)


【TRANS BOARD】
CN852
T801
POWER TRANSFORMER
AR,TW,SP,MY,MX,HK,E3,E2,EA MODEL,HCD-HI1J
F802
R814
R815
EE,IT,G,AEP,UK,AU MODEL
JR805
AC IN
CN851
F801
JW804
JW803
S801
HCD-HI1: AR,TW,SP,MY,MX,HK,E3,E2,EA MODEL
JW802
EE,IT,G,AEP,UK,AU MODEL
S801
VOLTAGE SELECTOR
240V←120V
1-658-263-
12
(13)
【LOADING BOARD】
S292
LOAD IN
M903
LOADING MOTOR
S291
LOAD OUT
CN291
WHT
1-650-836-
11
(11)
【MAIN BOARD】
J701
MD OUT
MD IN
L
R
EE,UK,IT,G,AEP MODEL
CN108
IC106
IC102
IC105
IC402
IC401
IC701
CN103
CN102
CN101
CN104
CN105
CLP001
CLP003
BD BOARD
CN1102
(Page 48)
TUNER BOARD
CN1
(Page 38)
(Page 39)
AUDIO BOARD
CN601
(Page 50)
PANEL BOARD
CN501
(Page 58)
【POWER BOARD】
CLP002
CN803
CN804
CN805
CN802
CN801
RED
BLK
WHT
IC802
IC901
1-658-262-
13
(13)
1-658-261-
12
(13)
【POWER AMP BOARD】

02



• SEMICONDUCTOR LOCATION

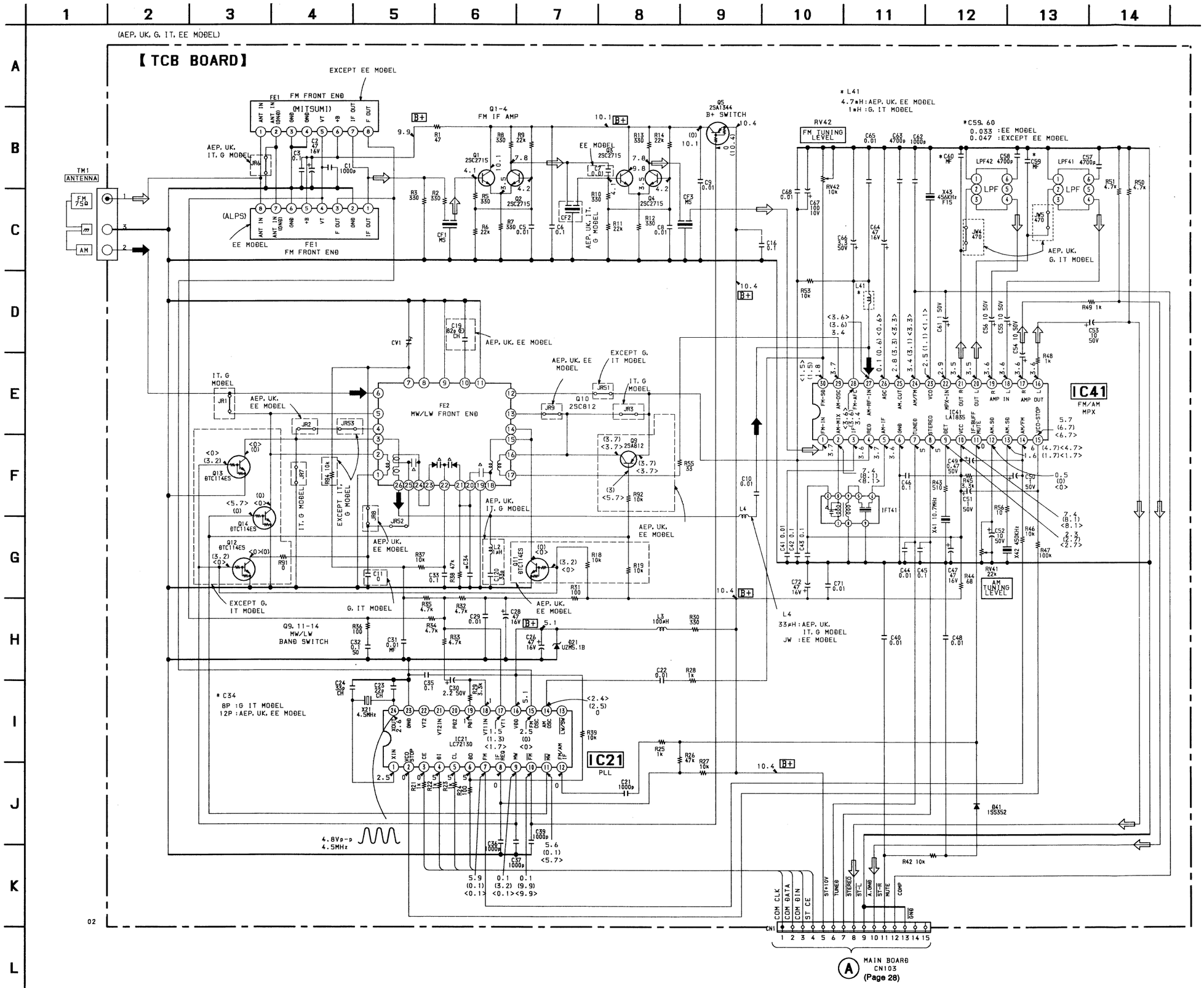
Ref. No.	Location	Ref. No.	Location
D102	D–13	IC701	B-10
D103	D–13	IC801	J-1
D104	D–11		
D105	D–10	IC802	F-4
D106	C–10	IC901	I-3
		IC971	E-14
D107	H–14		
D108	H–15	Q101	H-14
D109	H–15	Q102	C-13
D110	H–15	Q103	B-14
D111	H–15	Q104	C-13
		Q105	D-9
D120	F–13		
D121	C-10	Q106	D-9
D402	E-13	Q401	F-12
D403	F-12	Q403	F-14
D404	E-13	Q404	H-11
		Q405	E-11
D703	E-9		
D704	F-8	Q408	E-12
D801	F-3	Q409	E-12
D802	F-4	Q410	F-11
D803	F-4	Q411	F-11
		Q412	F-12
D804	F-4		
D805	G-4	Q413	F-13
D807	G-5	Q414	F-12
D808	G-5	Q451	F-11
D809	G-2	Q701	C-11
		Q702	B-11
D810	G-2		
D811	G-2	Q703	A-13
D812	G-2	Q704	A-13
D901	H-2	Q705	B-12
D902	H-4	Q801	F-4
		Q802	G-4
D903	G-5		
D904	G-5	Q804	I-5
D972	E-16	Q805	G-6
D1002	C-16	Q806	G-5
D1003	C-16	Q807	F-4
		Q808	G-5
D1004	D-16		
		Q901	G-3
IC101	G-14	Q902	H-4
IC102	D-12	Q903	G-5
IC103	G-16	Q904	G-5
IC104	D-15	Q971	F-16
IC105	C-14		
		Q972	E-15
IC106	D-11	Q1001	D-15
IC401	G-12	Q1051	E-15
IC402	F-12		

Note:

- ○— : parts extracted from the component side.
- ▒▒ : Pattern on the side which is seen.

6-6. SCHEMATIC DIAGRAM – TCB SECTION – (AEP,UK,G,IT,EE MODEL)

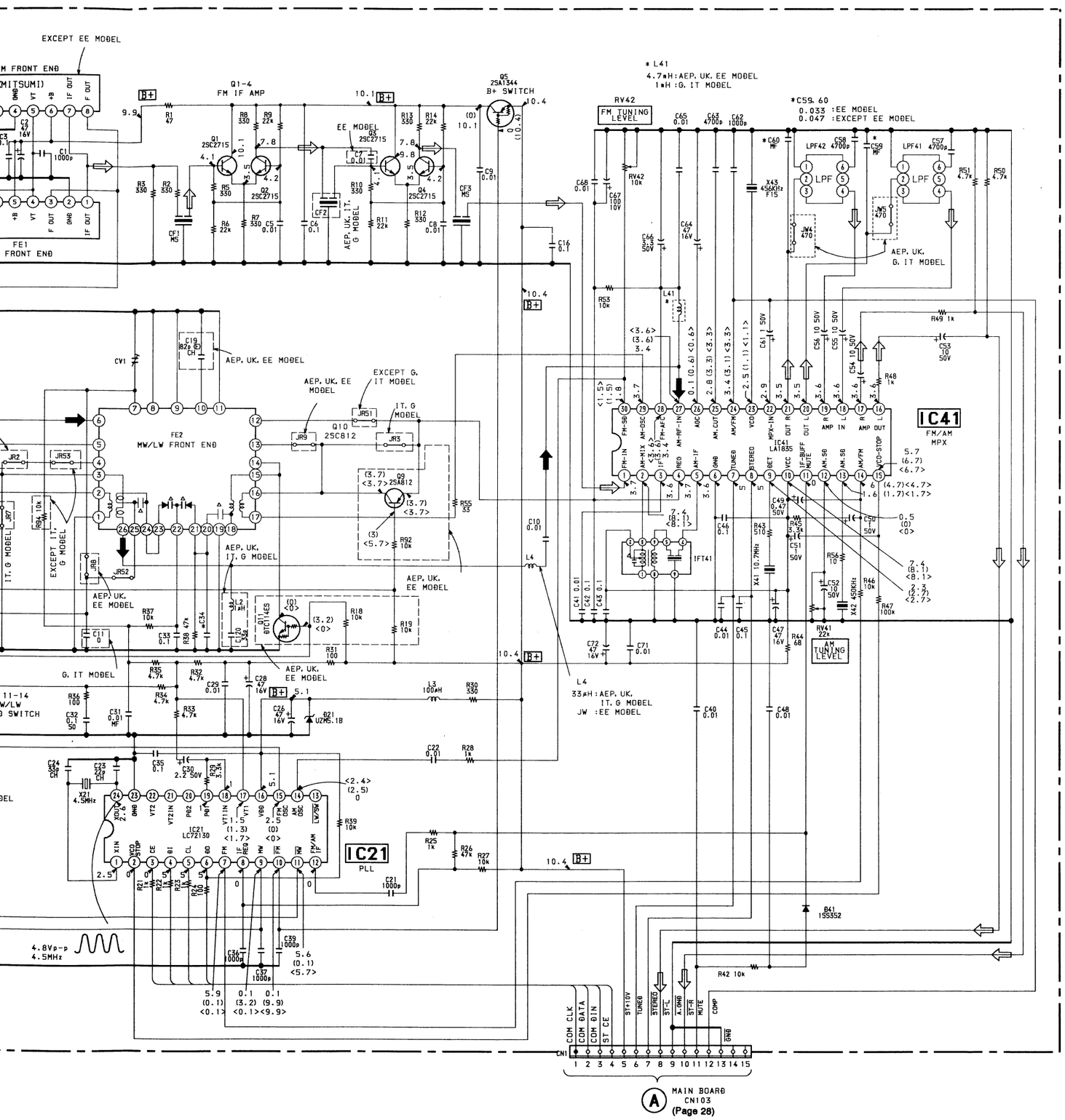
● Refer to page 42 for IC Block Diagrams.



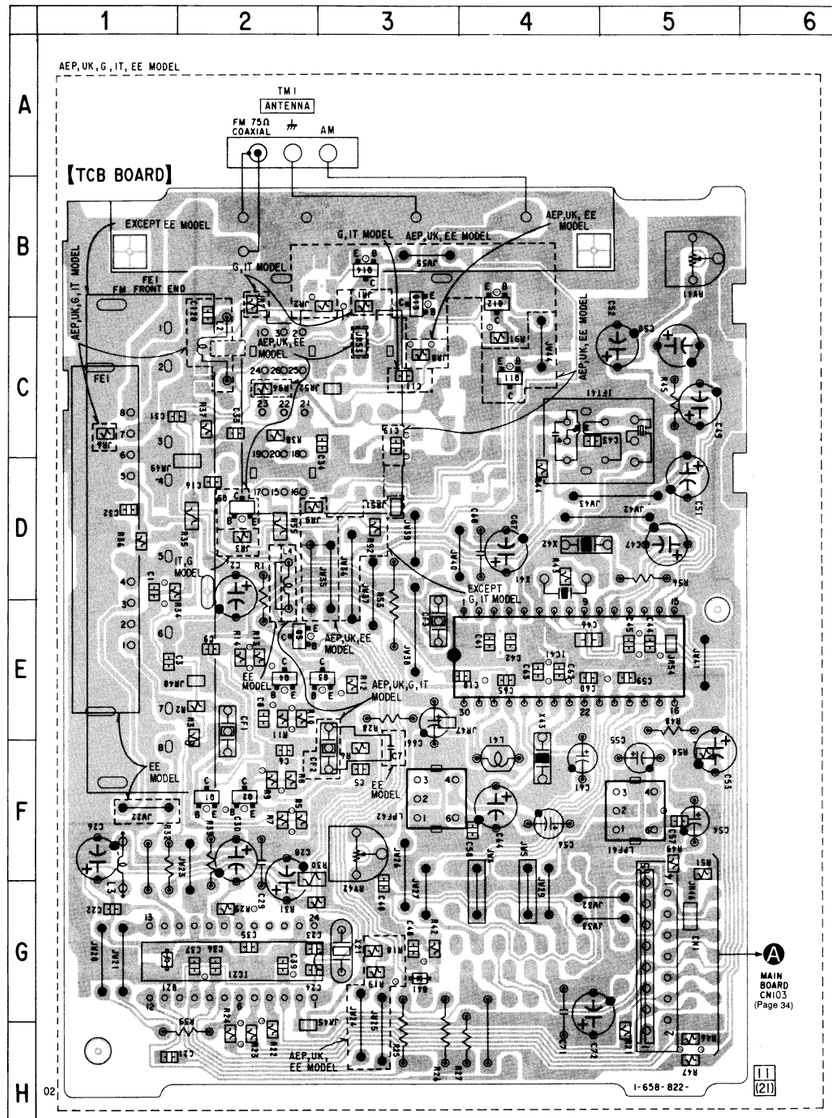
Note :

- All capacitors are in μF unless otherwise noted. pF: μμF 50WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and 1/4 W or less unless otherwise specified.
- △ : internal component.
- B + : B+ Line
- ▭ : adjustment for repair.
- Voltage and waveforms are dc with respect to ground under no-signal (detuned) conditions.
  no mark : FM
  ( ) : AM
- Voltages are taken with a VOM (Input impedance 10MΩ). Voltage variations may be noted due to normal production tolerances.
- Waveforms are taken with a oscilloscope. Voltage variations may be noted due to normal production tolerances.
- Signal path.
  ⇨ : FM
  ➡ : AM

● Refer to page 42 for IC Block Diagrams.



6-7. PRINTED WIRING BOARDS – TCB SECTION – (AEP,UK,G,IT,EE MODEL)



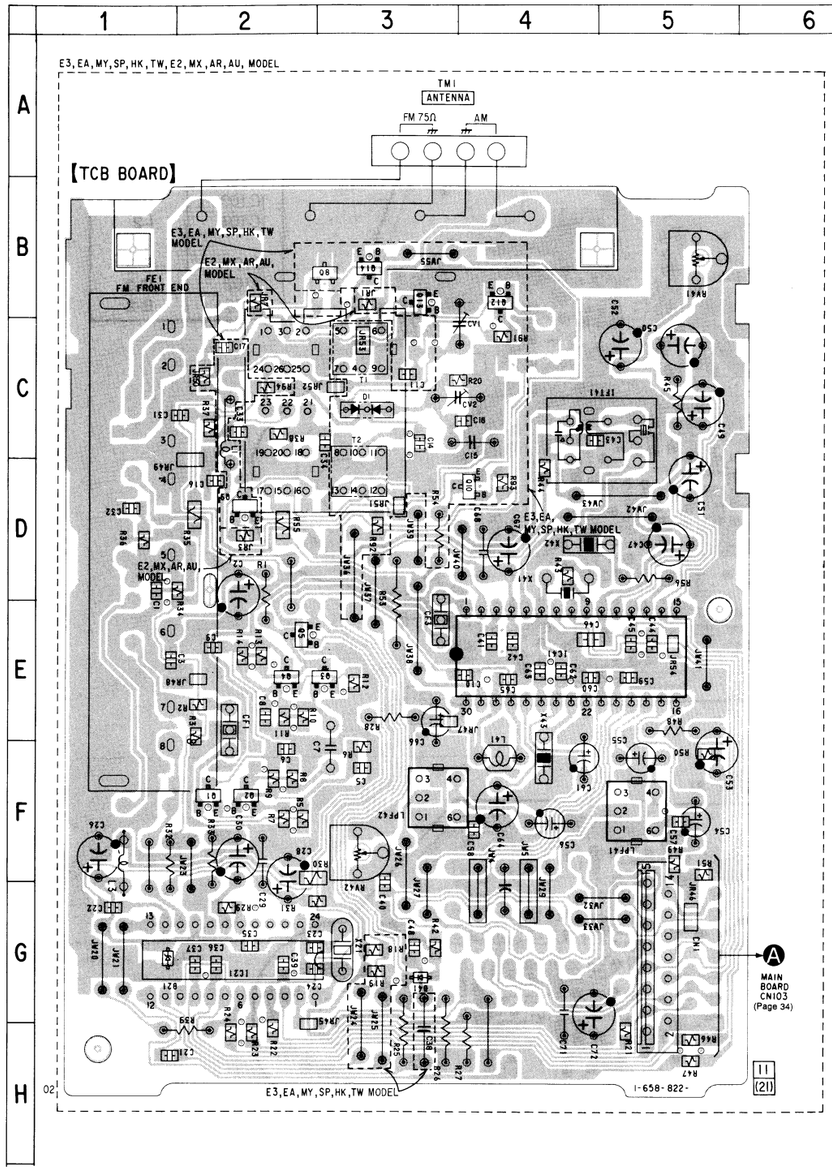
● SEMICONDUCTOR LOCATION

Ref. No.	Location	Ref. No.	Location
D21	G-1	Q4	E-2
D41	G-3	Q5	E-2
		Q9	D-2
IC21	G-2	Q11	C-4
IC41	E-4	Q12	B-4
Q1	F-2	Q13	B-3
Q2	F-2	Q14	B-3
Q3	E-3		

Note:

- ○— : parts extracted from the component side.
- ▒▒▒ : Pattern on the side which is seen.

6-8. PRINTED WIRING BOARDS – TCB SECTION – (E3,EA,MY,SP,HK,TW,E2,MX,AR,AU MODEL)



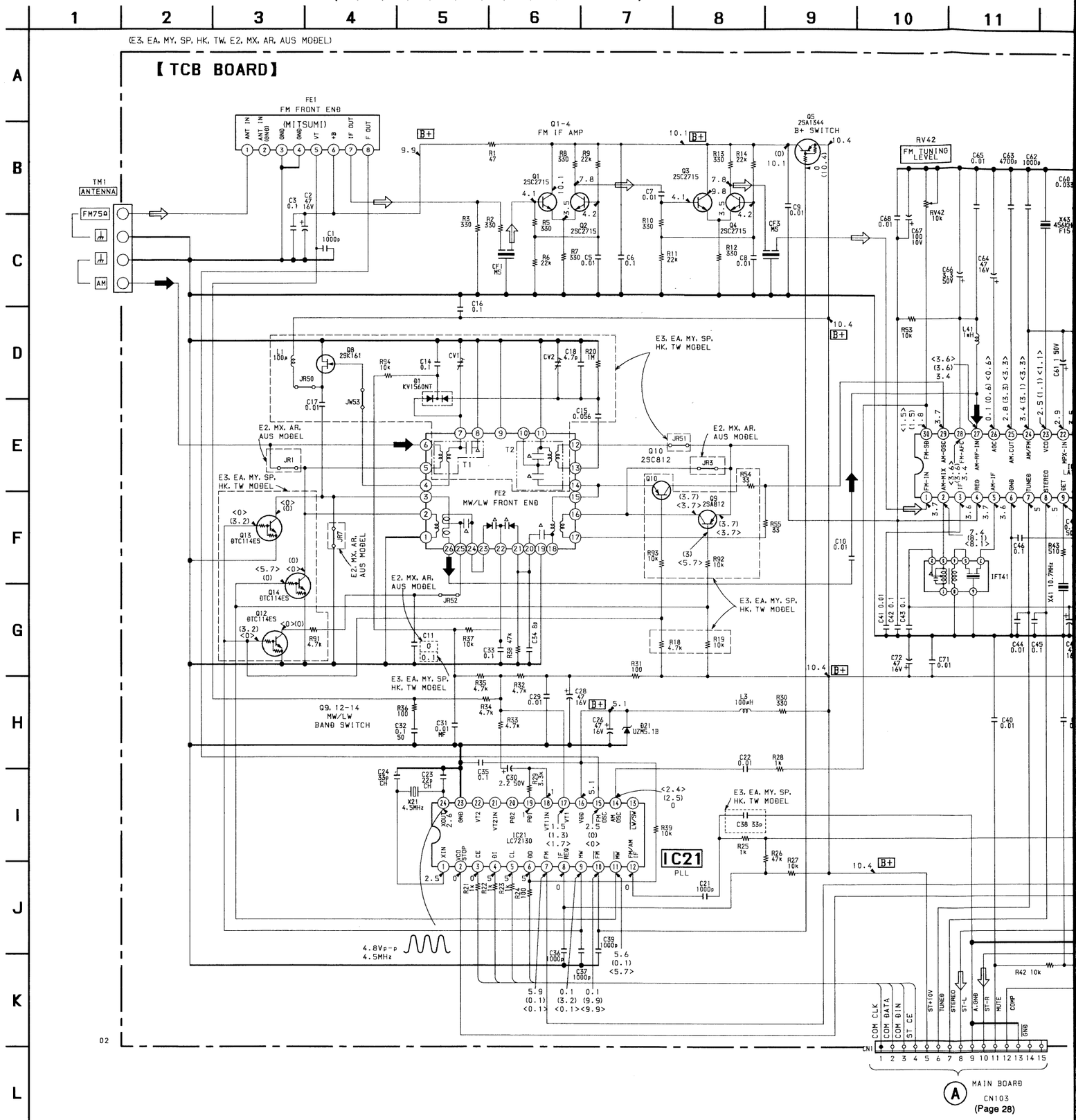
● SEMICONDUCTOR LOCATION

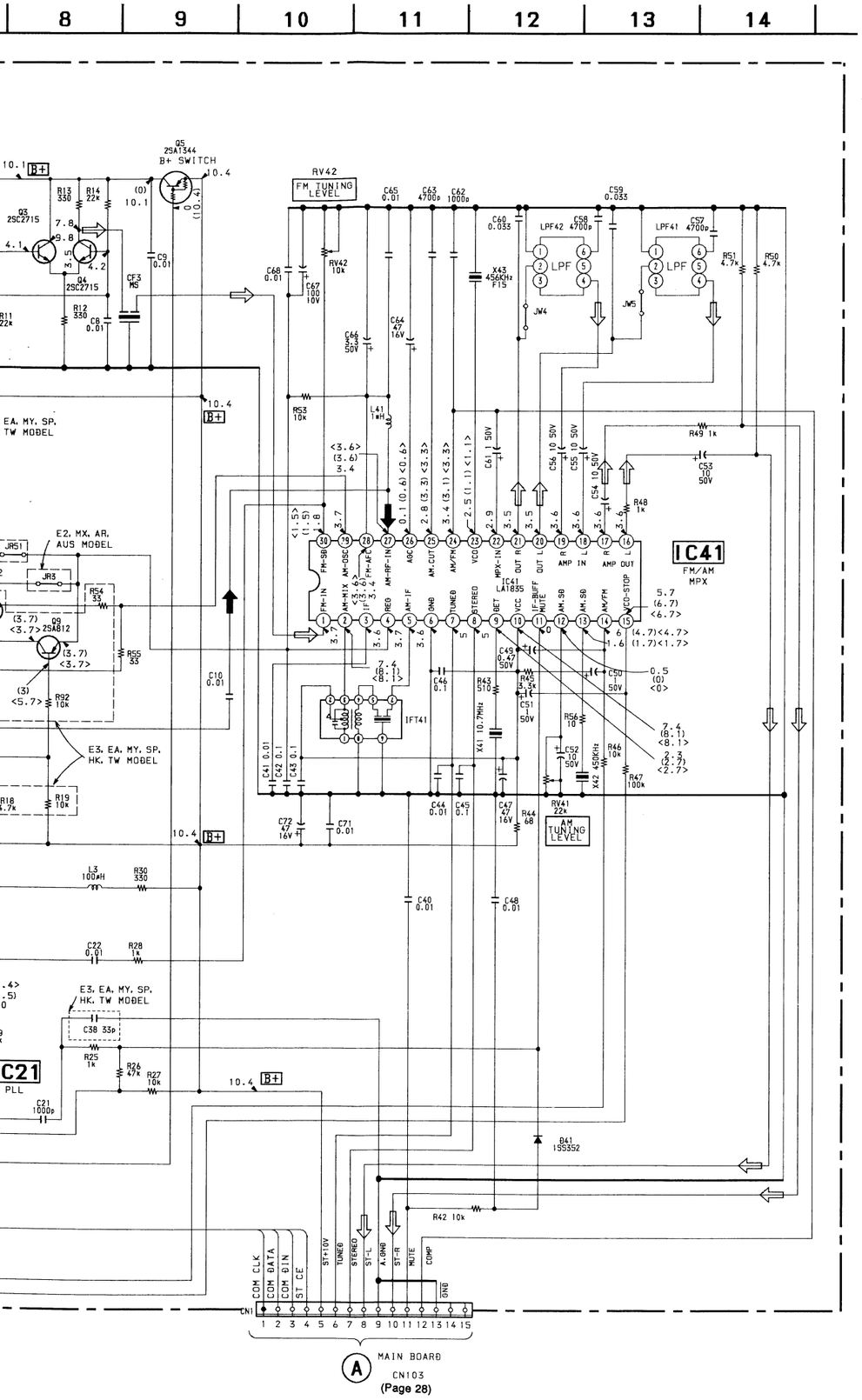
Ref. No.	Location	Ref. No.	Location
D1	C-3	Q4	E-2
D21	G-1	Q5	E-2
D41	G-3		
		Q8	B-3
IC21	G-2	Q9	D-2
IC41	E-4	Q10	D-4
		Q12	B-4
Q1	F-2	Q13	B-3
Q2	F-2		
Q3	E-3	Q14	B-3

Note:

- ○— : parts extracted from the component side.
- ▒▒ : Pattern on the side which is seen.

6-9. SCHEMATIC DIAGRAM – TCB SECTION – (E3,EA,MY,SP,HK,TW,E2,MX,AR,AU MODEL)



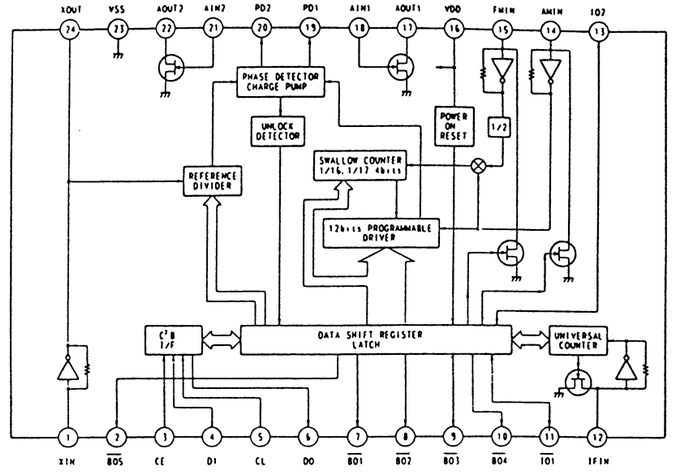


Note :

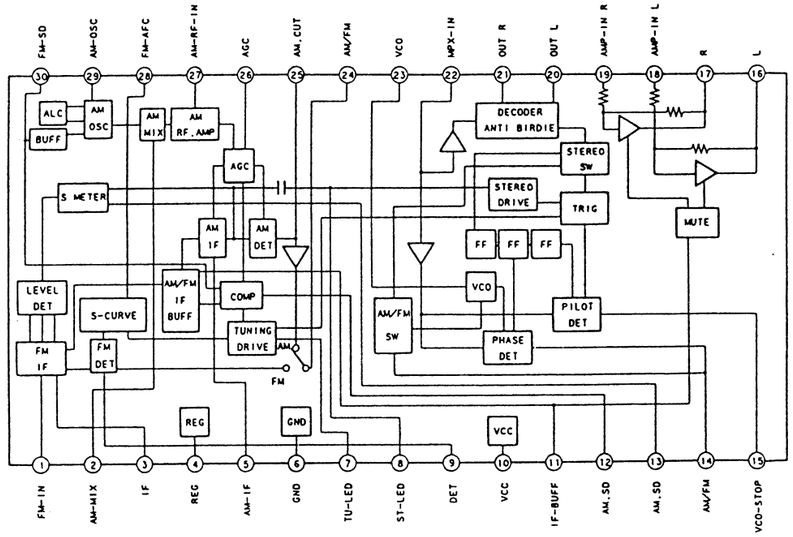
- All capacitors are in μF unless otherwise noted. pF: μμF 50WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and 1/4 W or less unless otherwise specified.
- △ : internal component.
- B+ : B+ Line
- [ ] : adjustment for repair.
- Voltage and waveforms are dc with respect to ground under no-signal (detuned) conditions.
  no mark : FM
  ( ) : AM
- Voltages are taken with a VOM (Input impedance 10MΩ). Voltage variations may be noted due to normal production tolerances.
- Waveforms are taken with a oscilloscope. Voltage variations may be noted due to normal production tolerances.
- Signal path.
  ⇨ : FM
  ➡ : AM

IC BLOCK DIAGRAMS –TCB SECTION–

IC21 LC72130

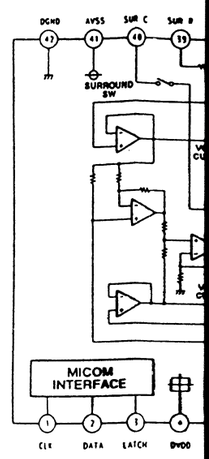


IC41 LA1835

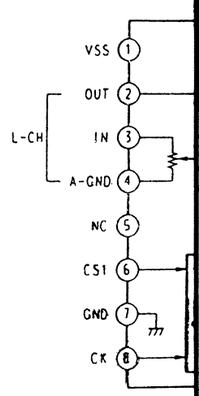


IC BLOCK DIAGRAMS

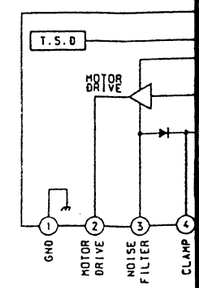
IC104 M62423FP

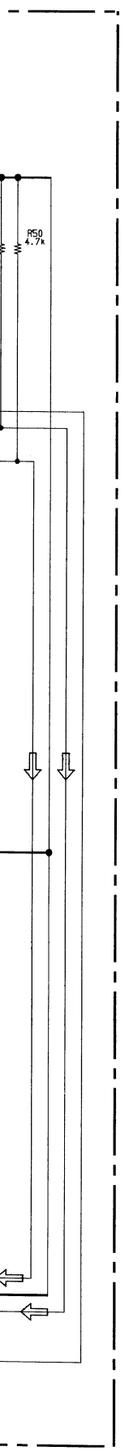


IC105 TC9210P



IC106,402 BL1641



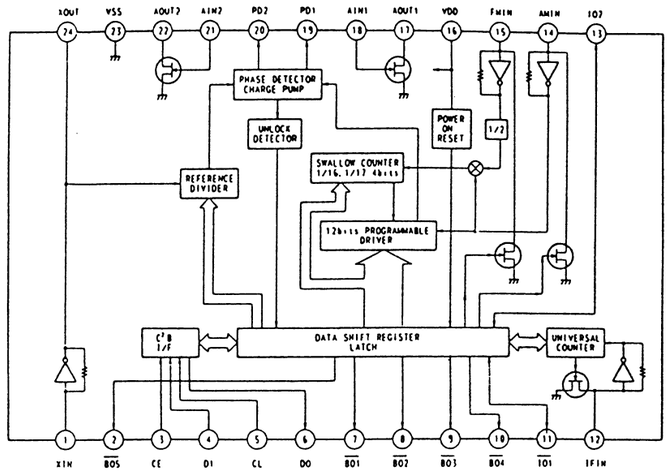


Note :

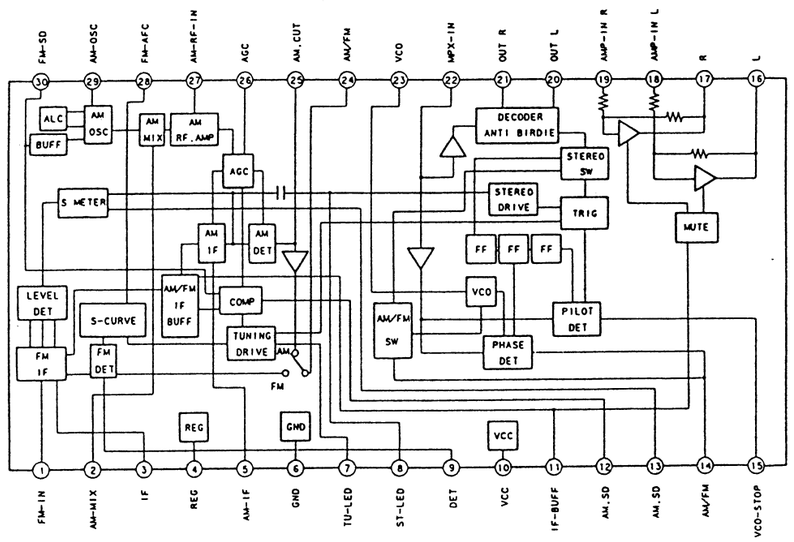
- All capacitors are in μF unless noted. pF: μμF 50WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and 1/4 W or less unless otherwise specified.
- Δ : internal component.
- B + : B+ Line
- ▭ : adjustment for repair.
- Voltage and waveforms are dc with respect to ground under no-signal (detuned) conditions.
  no mark : FM
  ( ) : AM
- Voltages are taken with a VOM (Input impedance 10MΩ). Voltage variations may be noted due to normal production tolerances.
- Waveforms are taken with a oscilloscope.
  Voltage variations may be noted due to normal production tolerances.
- Signal path.
  ⇨ : FM
  ➡ : AM

IC BLOCK DIAGRAMS –TCB SECTION–

IC21 LC72130

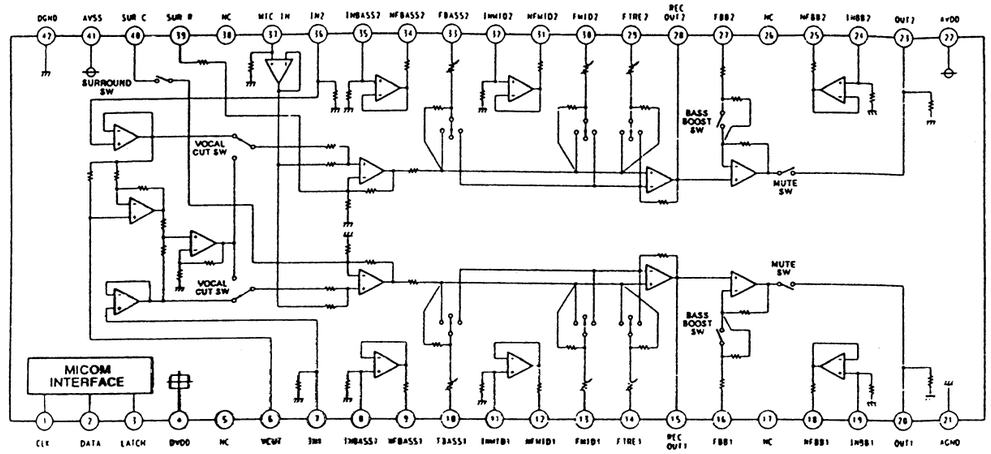


IC41 LA1835

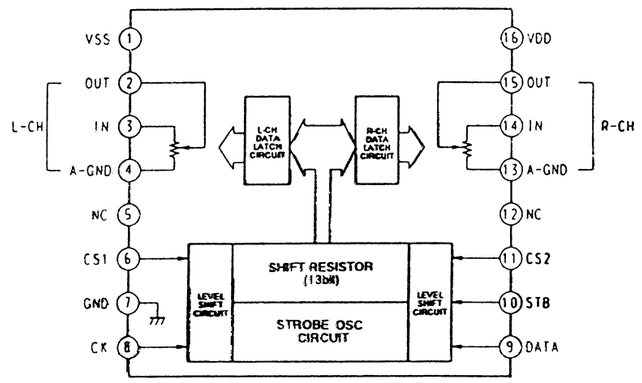


IC BLOCK DIAGRAMS –MAIN SECTION–

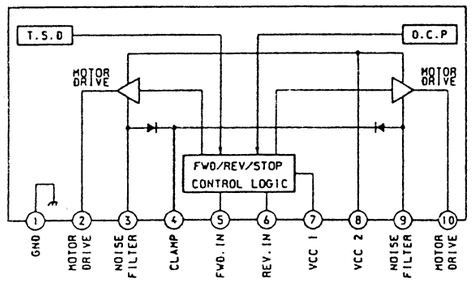
IC104 M62423FP



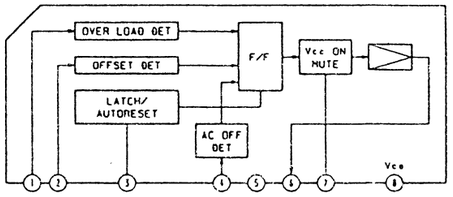
IC105 TC9210P



IC106,402 BL1641

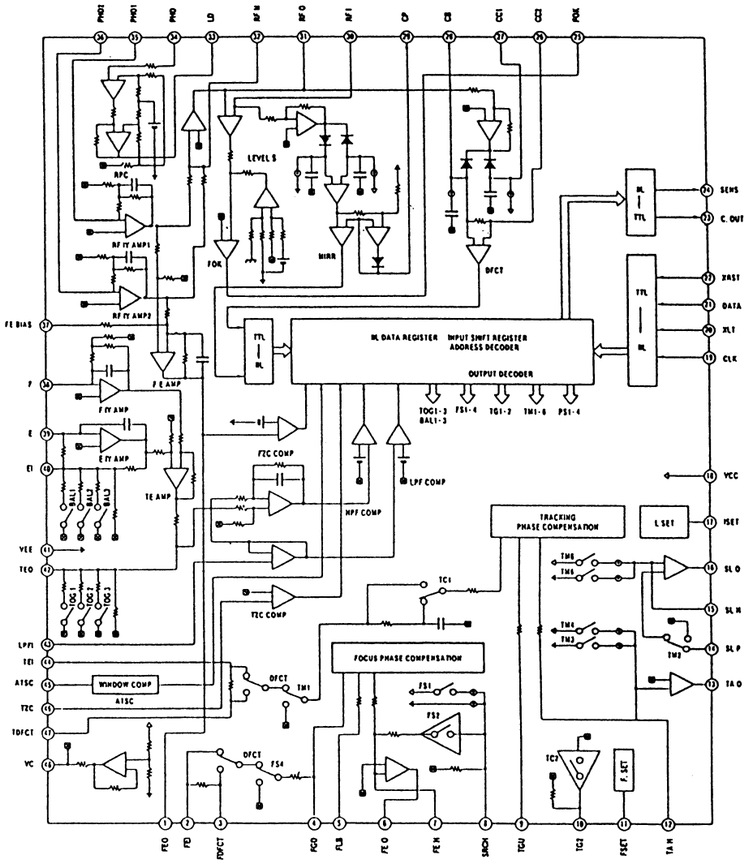


IC971 μPC1237HA

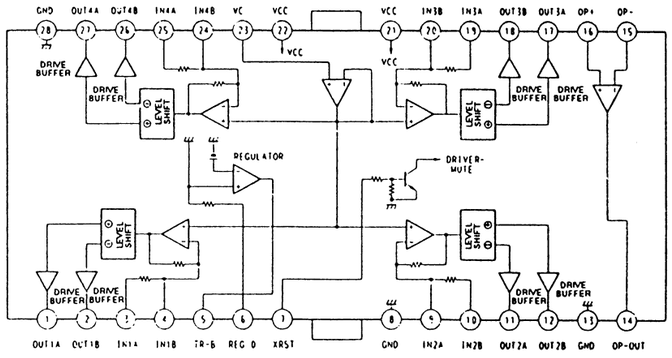


IC BLOCK DIAGRAMS –BD SECTION–

IC101 CXA1782BQ

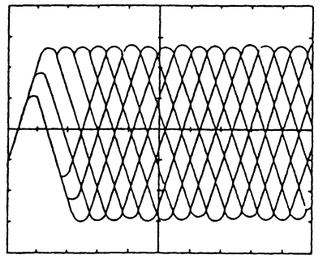


IC102 BA6397FP-T1

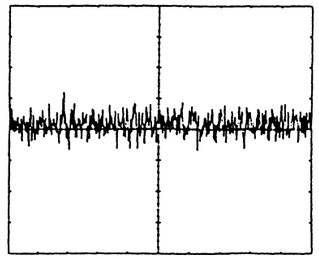

GND OUT4A OUT4B IN4A IN4B VC VCC VCC IN3B IN3A OUT3B OUT3A OP+ OP-
DRIVE BUFFER
LEVEL SHIFT
REGULATOR
DRIVER-MUTE
OUT1A OUT1B IN1A IN1B TR-B REG O XRST GND IN2A IN2B OUT2A OUT2B GND OP-OUT

● WAVEFORMS – BD SECTION –

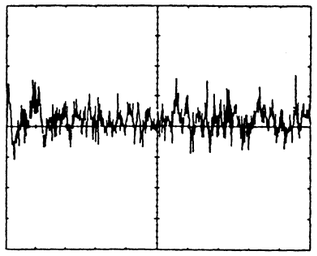
① IC101 ㉛ pin 1.4Vp-p



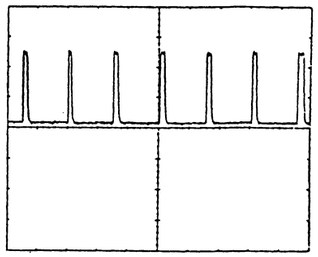
② IC101 ㊹ pin 8mVp-p 0.2ms/DIV



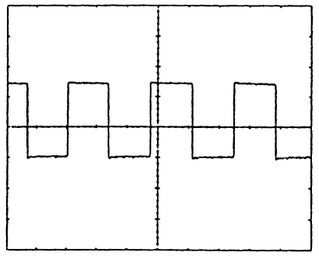
③ IC101 ② pin 20mVp-p 2ms/DIV



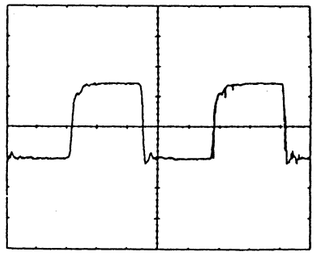
④ IC103 ③ pin 2.4Vp-p 7.5µsec



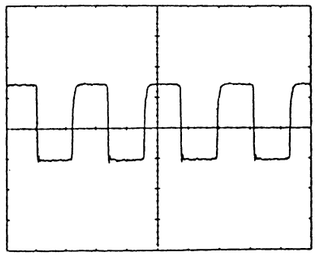
⑤ IC103 ㉘ pin 5.1Vp-p 137µsec



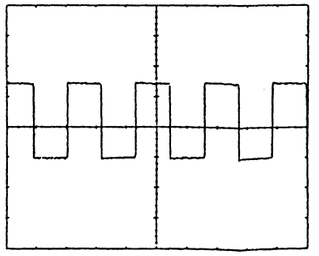
⑥ IC103 ㉕ pin 5.1Vp-p 232.7nsec



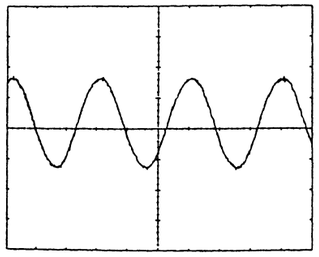
⑦ IC103 ㉒ pin 5.1Vp-p 472.7nsec



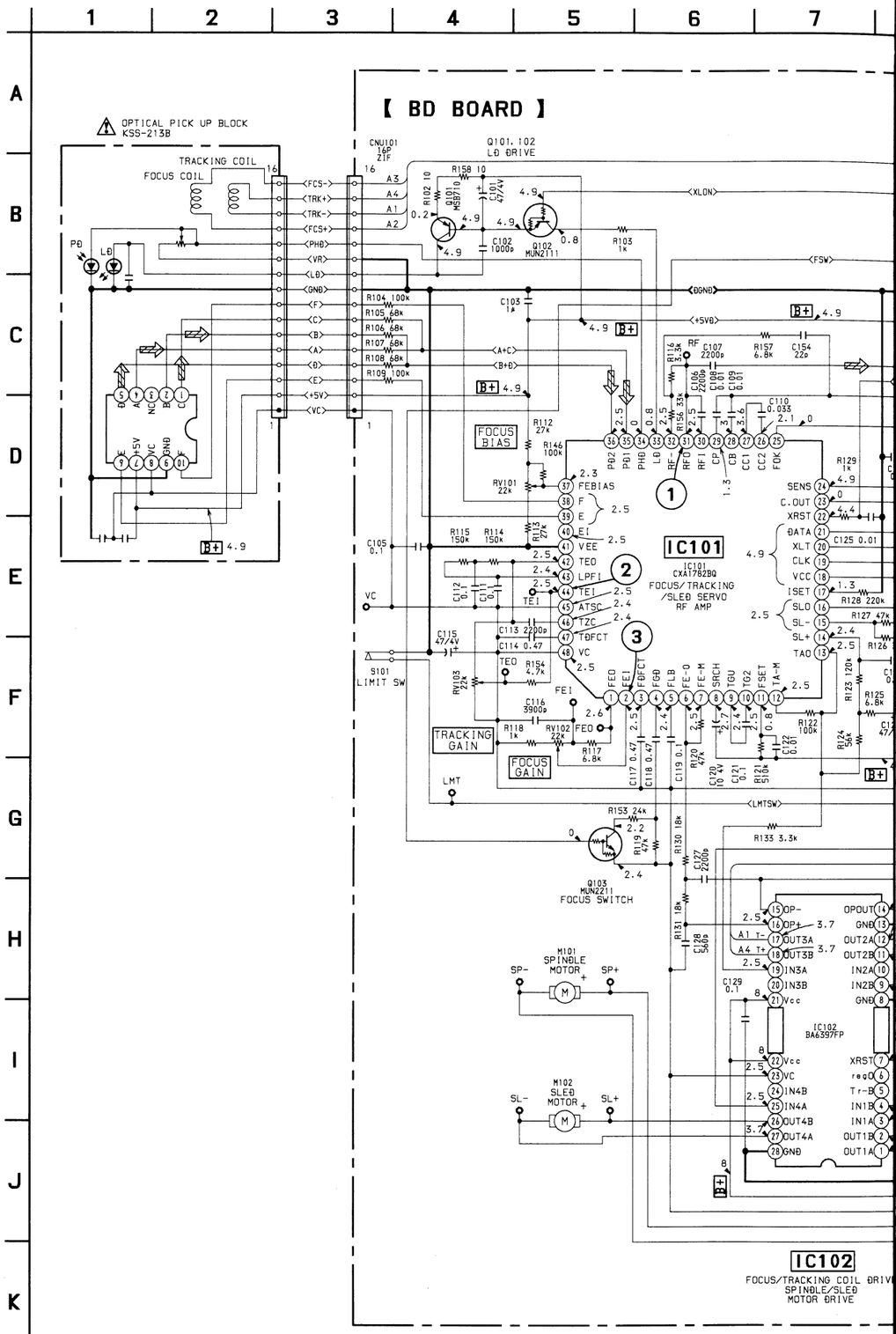
⑧ IC103 ⑳ pin 5.1Vp-p 23µsec



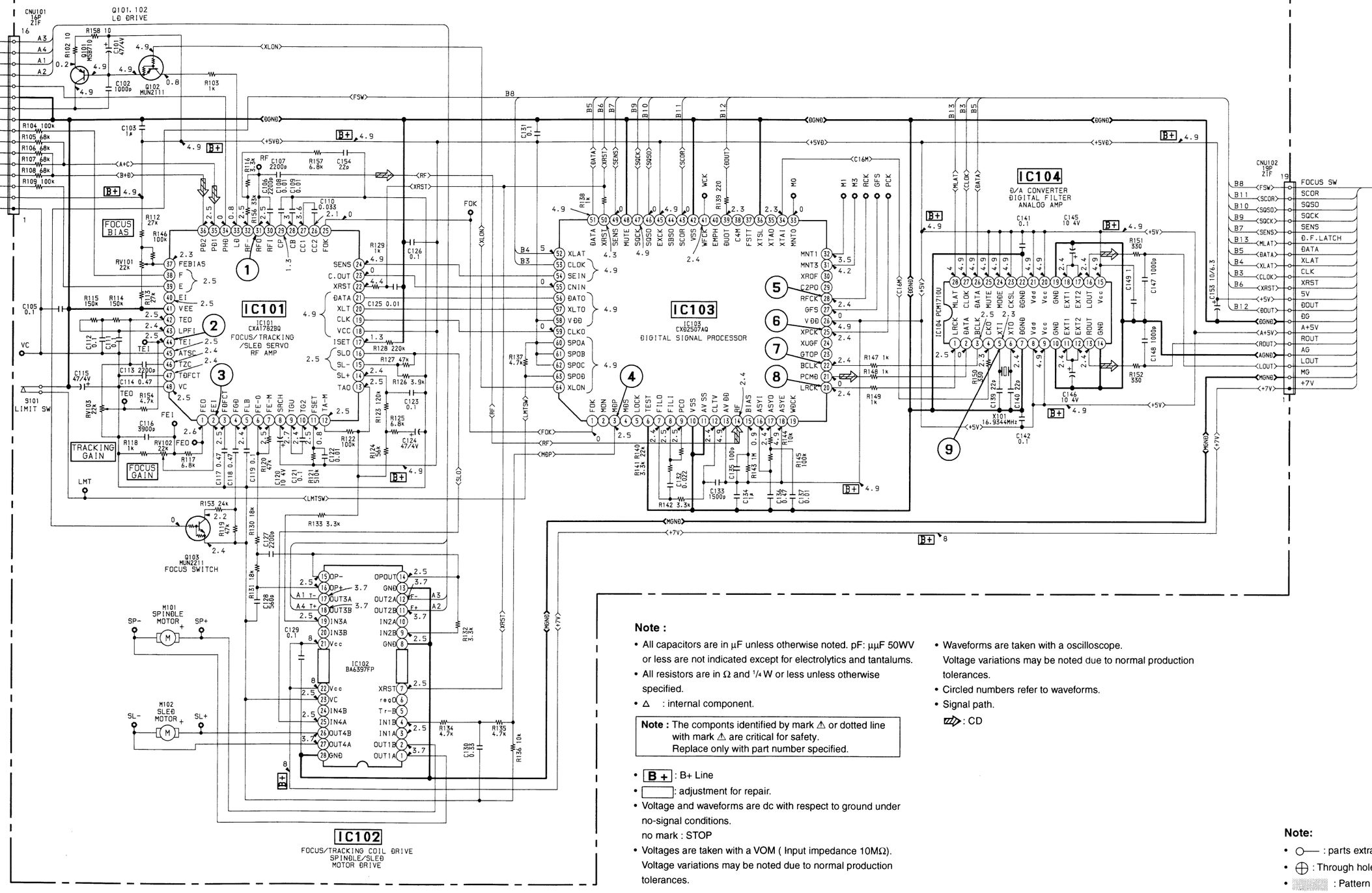
⑨ IC104 ⑤ pin 3Vp-p 16.9344MHz



6-10. SCHEMATIC DIAGRAM – BD SECTION –



【 BD BOARD 】

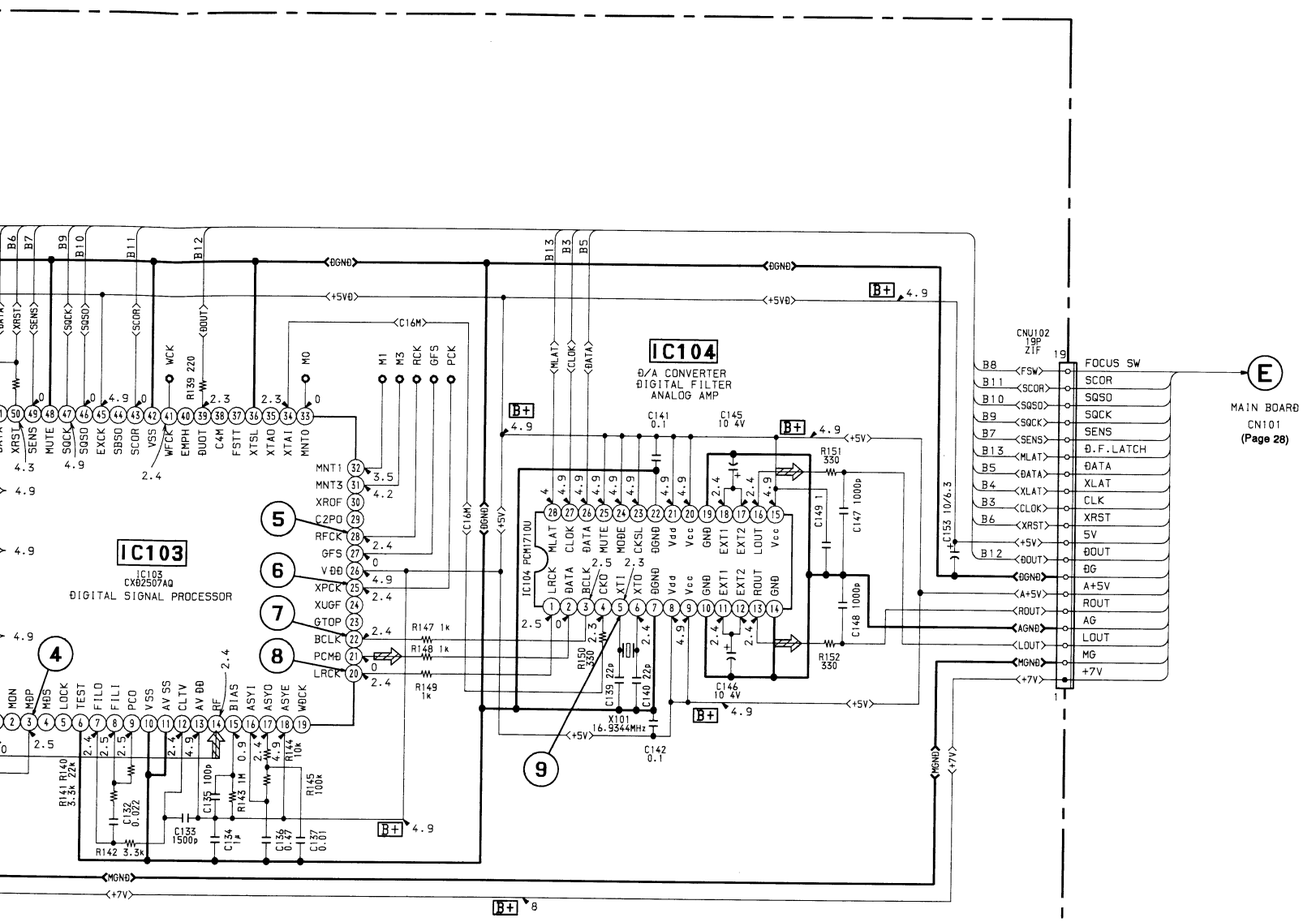


Note :

- All capacitors are in μF unless otherwise noted. pF: μμF 50WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and 1/4 W or less unless otherwise specified.
- △ : internal component.

Note : The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

- B+ : B+ Line
- [ ] : adjustment for repair.
- Voltage and waveforms are dc with respect to ground under no-signal conditions.
  no mark : STOP
- Voltages are taken with a VOM (Input impedance 10MΩ). Voltage variations may be noted due to normal production tolerances.
- Waveforms are taken with a oscilloscope.
  Voltage variations may be noted due to normal production tolerances.
- Circled numbers refer to waveforms.
- Signal path.
  ▨▨▨



Note :

- All capacitors are in μF unless otherwise noted. pF: μμF 50WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and 1/4 W or less unless otherwise specified.
- △ : internal component.

Note : The comporits identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
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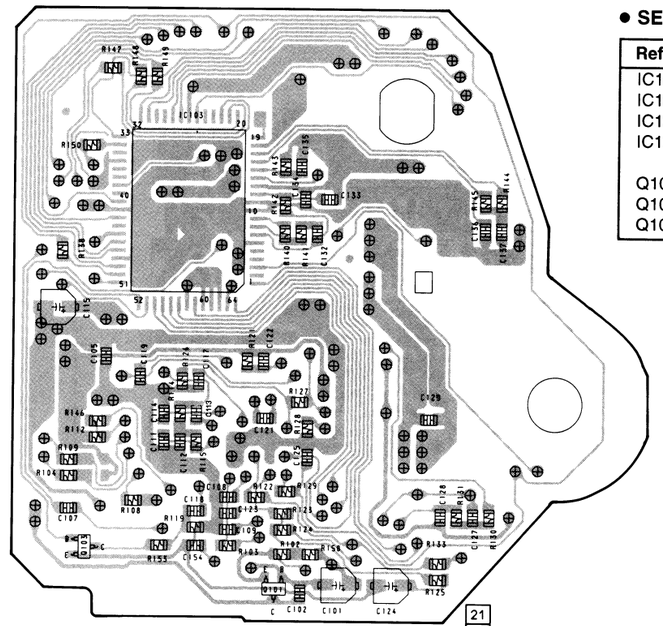
  no mark : STOP
- Voltages are taken with a VOM (Input impedance 10MΩ). Voltage variations may be noted due to normal production tolerances.
- Waveforms are taken with a oscilloscope.
  Voltage variations may be noted due to normal production tolerances.
- Circled numbers refer to waveforms.
- Signal path.
  ▨▨▶ : CD

Note:

- ○— : parts extracted from the component side.
- ⊕ : Through hole.
- ▒▒▒ : Pattern on the side which is seen.

6-11. PRINTED WIRING BOARDS – BD SECTION –

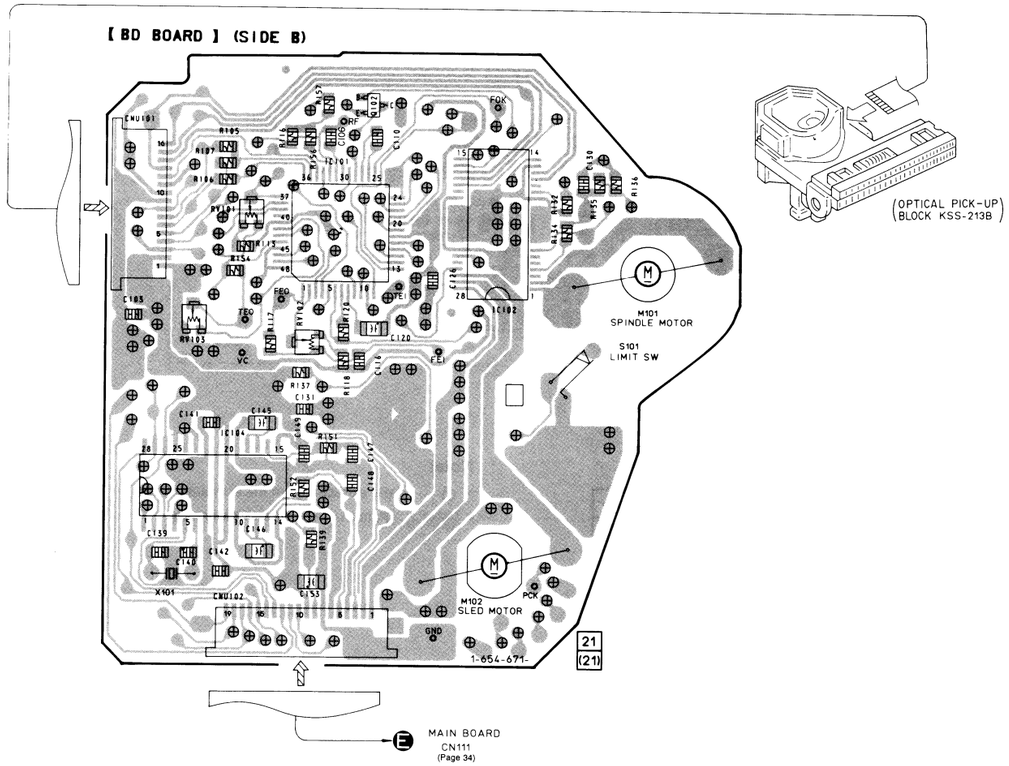
【 BD BOARD 】 (SIDE A)



- **SEMICONDUCTOR LOCATION**

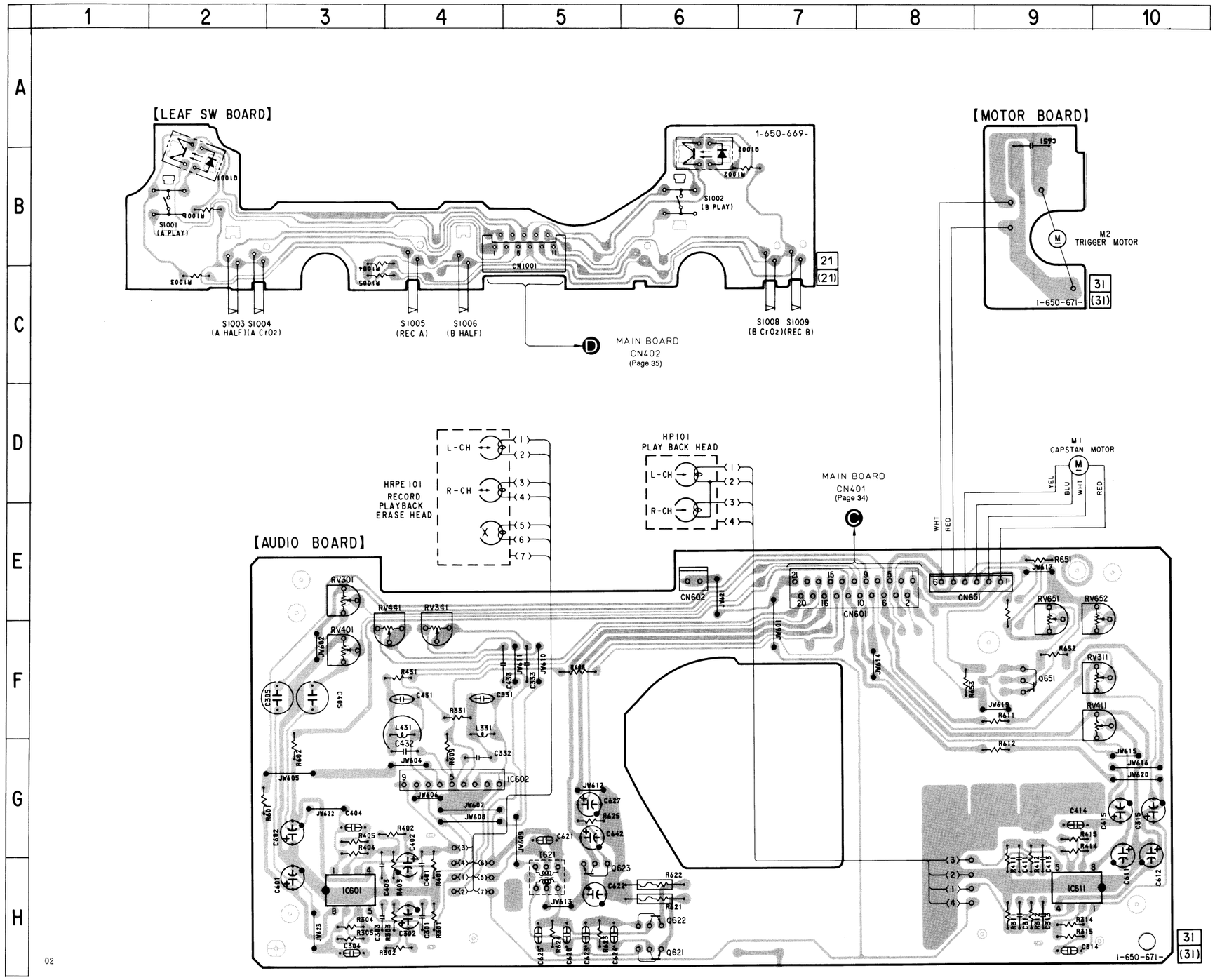
Ref. No.	Location
IC101	H-3
IC102	H-4
IC103	B-3
IC104	I-2
Q101	E-3
Q102	G-3
Q103	E-2

【 BD BOARD 】 (SIDE B)



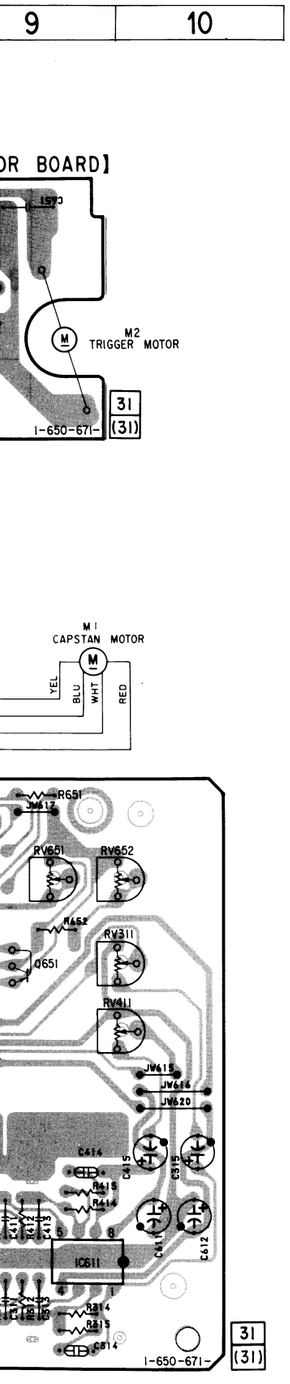
• SEMICONDUCTOR LOCATION

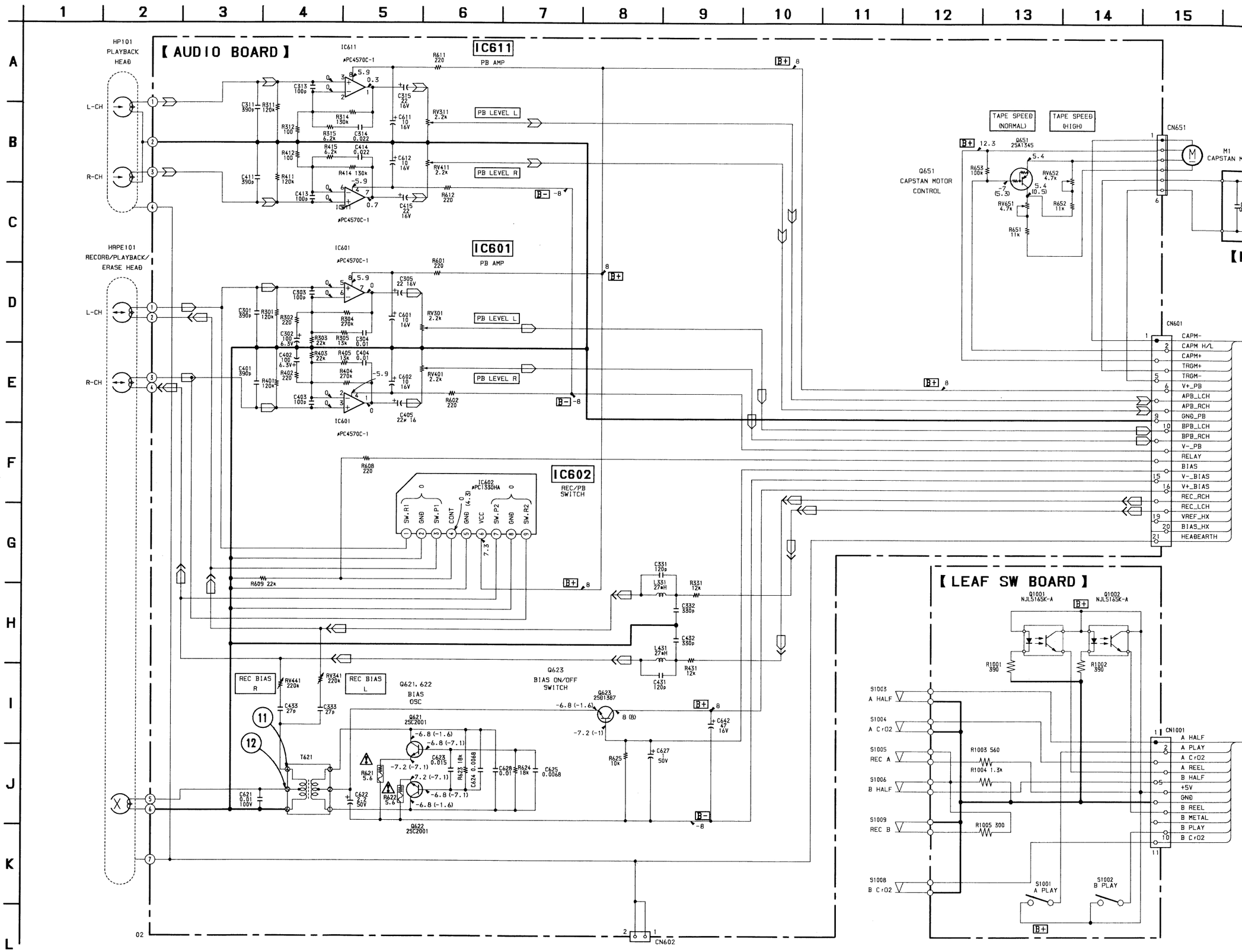
Ref. No.	Location
IC601	H-3
IC602	G-4
IC611	H-9
Q621	H-6
Q622	H-6
Q623	H-5
Q651	F-9
Q1001	B-2
Q1002	B-6

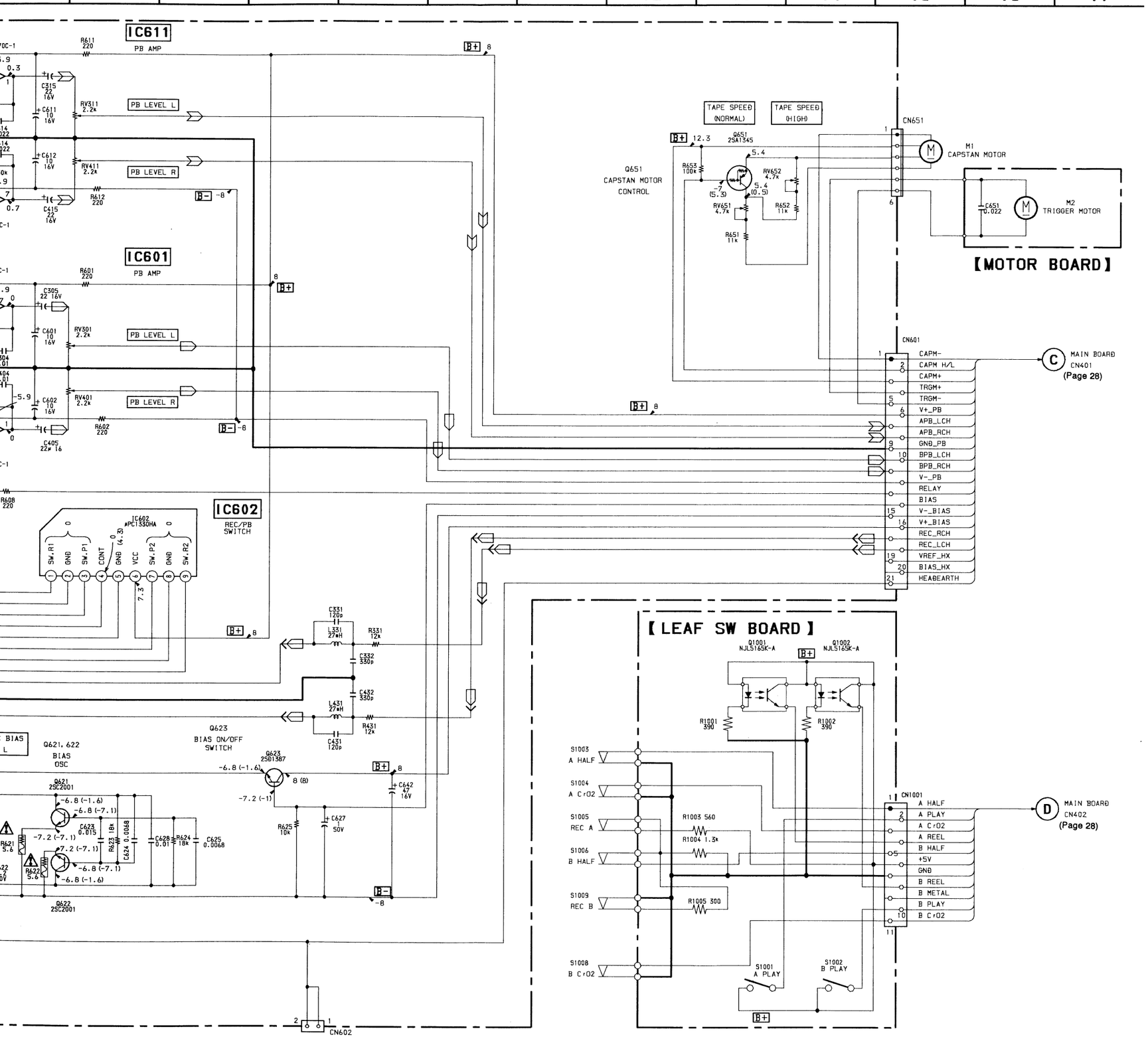


Note:

- ○— : parts extracted from the component side.
- ▒▒▒ : Pattern on the side which is seen.

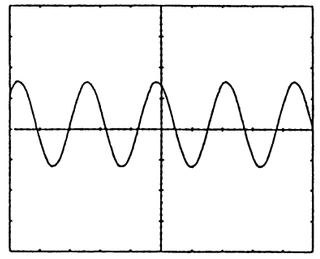

9
10
OR BOARD】
M2
TRIGGER MOTOR
31
1-650-671-
(31)
M1
CAPSTAN MOTOR
YEL
BLU
WHT
RED
R651
RV651
RV652
R652
RV311
Q651
JW615
JW616
JW620
C414
C415
R415
R414
C413
C412
C611
IC611
R214
R215
C214
1-650-671-
31
(31)


1 2 3 4 5 6 7 8 9 10 11 12 13 14 15
A B C D E F G H I J K L
【AUDIO BOARD】
HP101
PLAYBACK
HEAD
L-CH
R-CH
HRPE101
RECORD/PLAYBACK/
ERASE HEAD
L-CH
R-CH
IC611
PC4570C-1
IC601
PC4570C-1
IC611
PB AMP
IC601
PB AMP
PB LEVEL L
PB LEVEL R
PB LEVEL L
PB LEVEL R
IC602
REC/PB
SWITCH
IC602
PC1330HA
SW.R1
GND
SW.P1
CONT
GND (4.3)
VCC
SW.P2
GND
SW.R2
REC BIAS
R
REC BIAS
L
RV441 220k
RV341 220k
Q621, 622
BIAS
OSC
Q621
2SC2001
Q622
2SC2001
T621
Q623
BIAS ON/OFF
SWITCH
Q623
2SD1387
8 (B)
TAPE SPEED
(NORMAL)
TAPE SPEED
(HIGH)
Q651
CAPSTAN MOTOR
CONTROL
Q651
2SA1345
CN651
M1
CAPSTAN MOTOR
CN601
CAPM-
CAPM H/L
CAPM+
TRGM+
TRGM-
V+_PB
APB_LCH
APB_RCH
GND_PB
BPB_LCH
BPB_RCH
V-_PB
RELAY
BIAS
V-_BIAS
V+_BIAS
REC_RCH
REC_LCH
VREF_HX
BIAS_HX
HEADEARTH
CN602
【LEAF SW BOARD】
Q1001
NJL5165K-A
Q1002
NJL5165K-A
S1003
A HALF
S1004
A CrO2
S1005
REC A
S1006
B HALF
S1009
REC B
S1008
B CrO2
S1001
A PLAY
S1002
B PLAY
CN1001
A HALF
A PLAY
A CrO2
A REEL
B HALF
+5V
GND
B REEL
B METAL
B PLAY
B CrO2
B+
B-

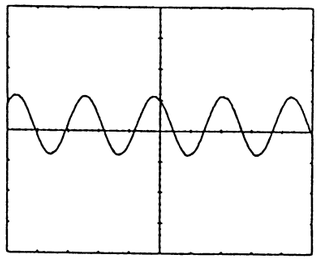


● WAVEFORMS – AUDIO SECTION –

(11) T621 141Vp-p 88.1kHz

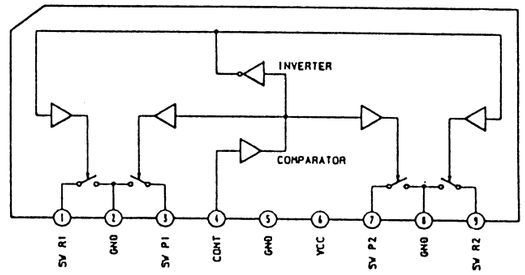


(12) T621 39.2Vp-p 88.1kHz



IC BLOCK DIAGRAMS –AUDIO SECTION–

IC602 μPC1330HA



Note :

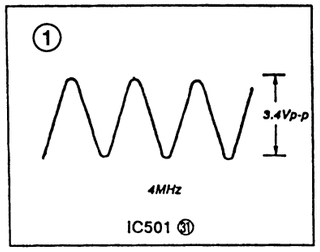
- All capacitors are in μF unless otherwise noted. pF: μμF 50WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and 1/4 W or less unless otherwise specified.
- : fusible resistor.

Note : The compoents identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

- B+ : B+ Line
- B– : B– Line
- : adjustment for repair.
- Voltage and waveforms are dc with respect to ground under no-signal conditions.
  no mark : PLAY
  ( ) : REC
- Voltages are taken with a VOM (Input impedance 10MΩ). Voltage variations may be noted due to normal production tolerances.
- Waveforms are taken with a oscilloscope.
  Voltage variations may be noted due to normal production tolerances.
- Circled numbers refer to waveforms.
- Signal path.
  : PB (DECK A)
  : PB (DECK B)
  : REC (DECK B)

6-14. SCHEMATIC DIAGRAM – PANEL SECTION –

• WAVEFORMS – PANEL SECTION –



Note :

- All capacitors are in µF unless otherwise noted. pF: µµF 50WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and 1/4 W or less unless otherwise specified.
- △ : internal component.
- [B+] : B+ Line
- [B–] : B– Line
- Voltage and waveforms are dc with respect to ground under no-signal (detuned) conditions.
  no mark : FM
- Voltages are taken with a VOM (Input impedance 10MΩ). Voltage variations may be noted due to normal production tolerances.
- Waveforms are taken with a oscilloscope.
  Voltage variations may be noted due to normal production tolerances.
- Circled numbers refer to waveforms.

【 PANEL BOARD 】

FL501
FLUORECENT INDICATOR TUBE

IC501
CXP82612-016Q
DISPLAY CONTROL

IC502
SBX1780-51
REMOTECONTROL
RECEIVER

S530
MULTIJOG STATION

TW, SP, MY, HK, E3, EA MODEL

Q501 2SC3398 FL B+ SWITCH

Q502, Q503, Q509 2SA1544 LED DRIVE

Q507 2SA1544 LED DRIVE

D502 11ES2

D501 1N4148M

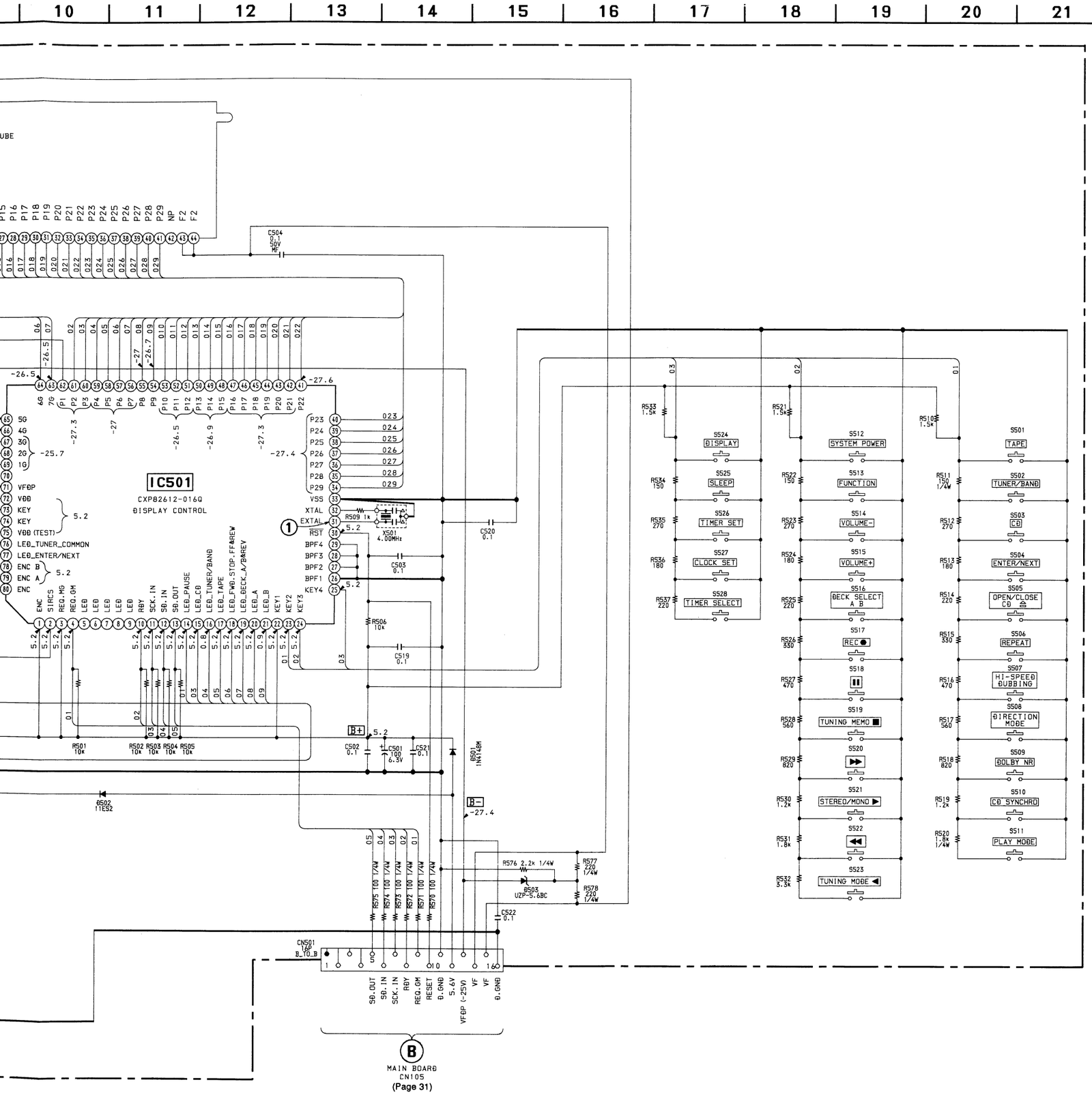
D503 UZP-5.6

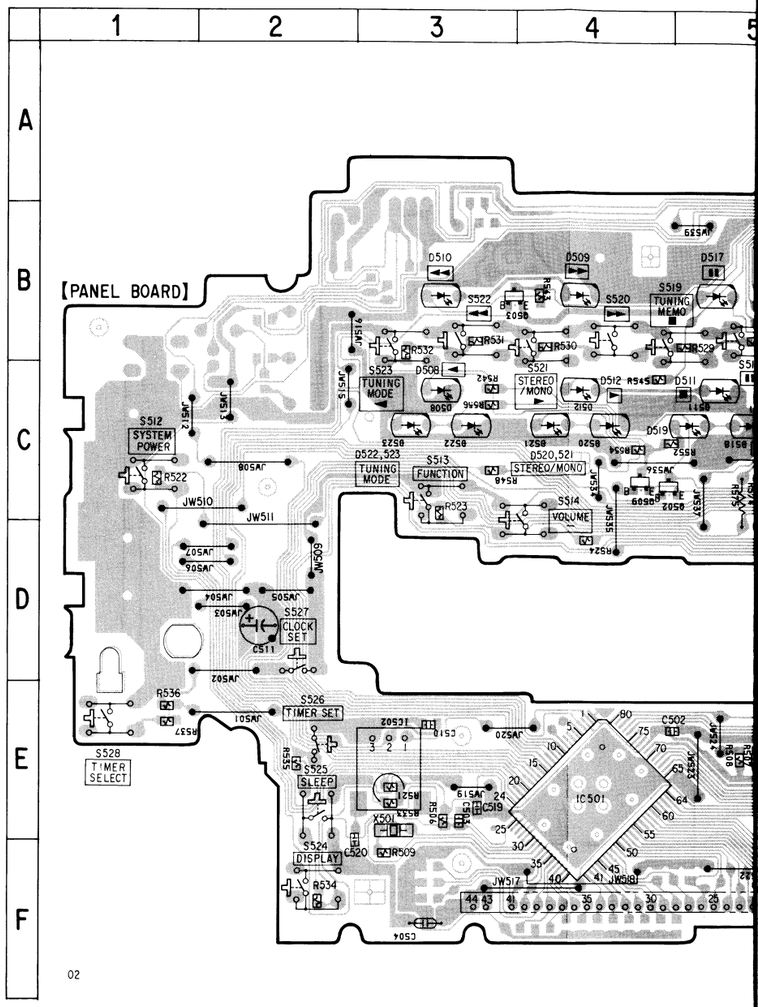
D512 D511 D510 D509 D508 D506, 507 D505 D504
▶ ■ ◀◀ ▶▶ ◀ DECK SELECT A B

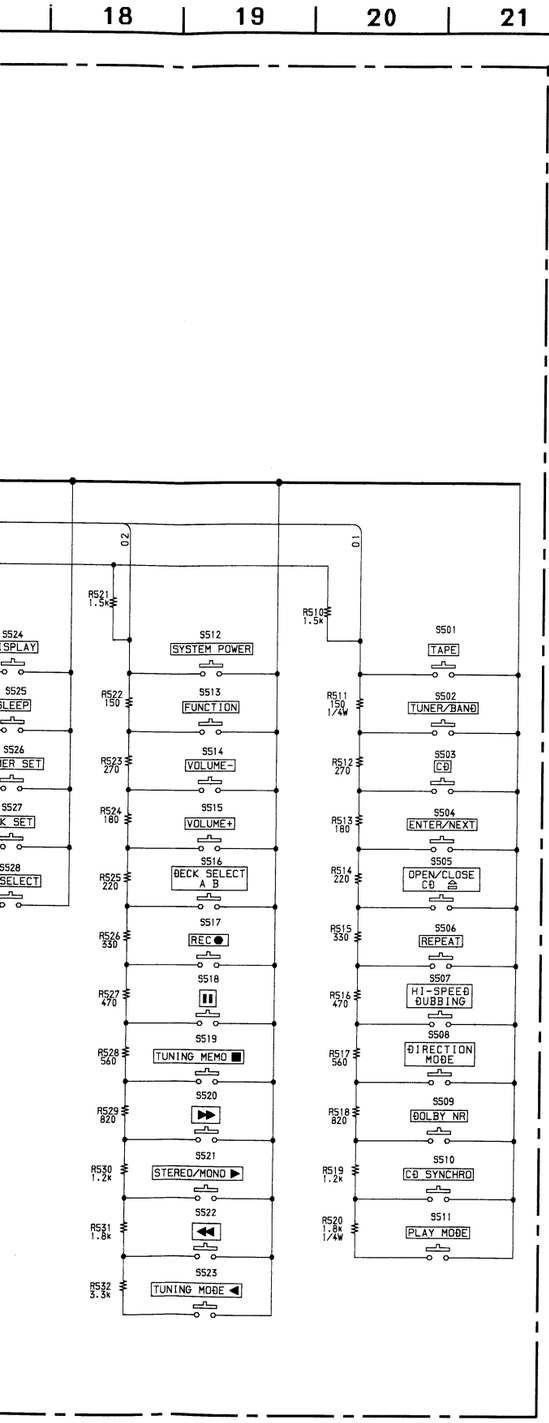
D522, 523 D520, 521 D518, 519
TUNING MODE STEREO/MONO TUNING MEMO

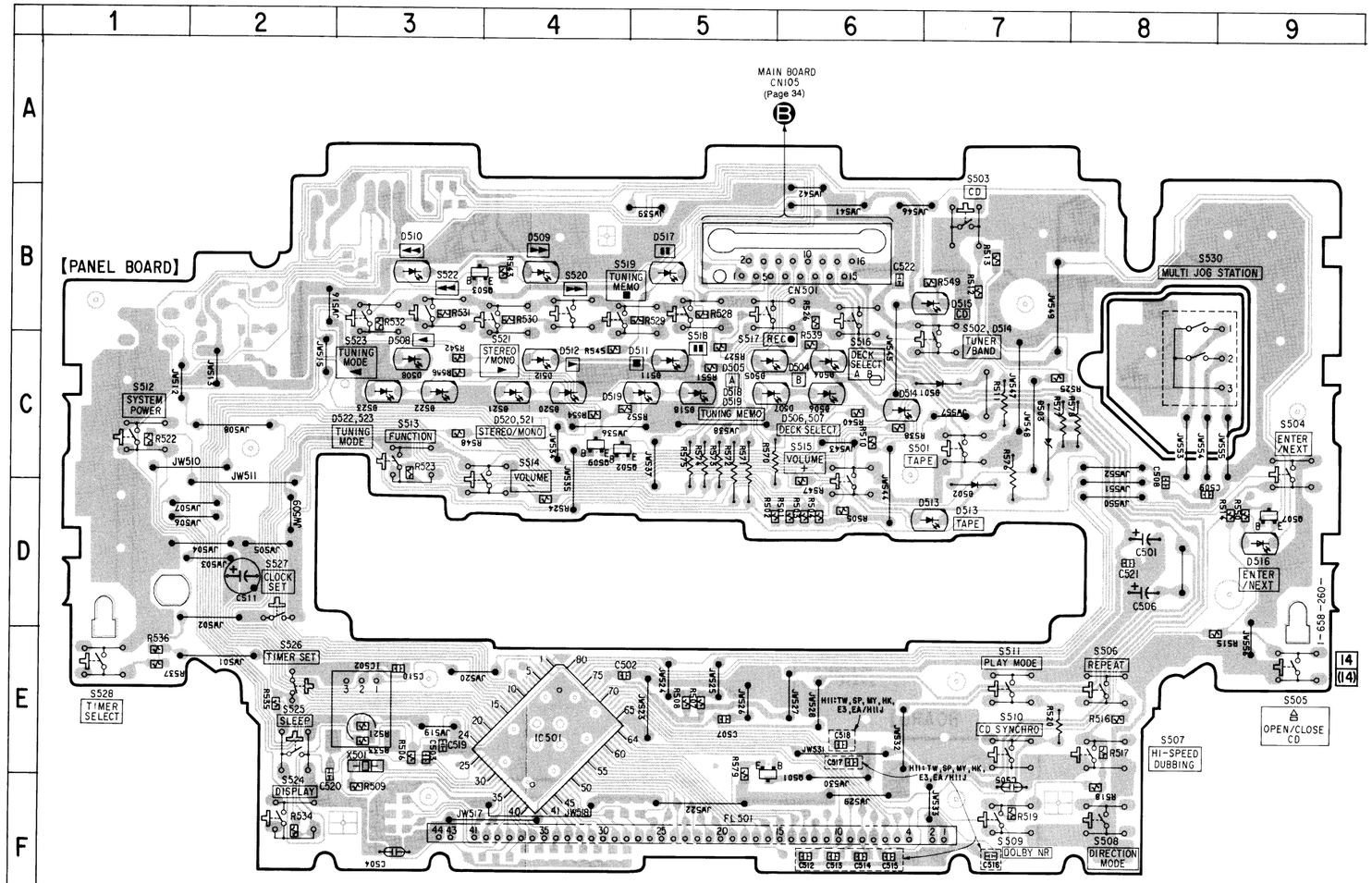
CN501
16P
B_TO_B

B
MAIN BOARD
CN105
(Page 31)


IC501
CXP82612-016Q
DISPLAY CONTROL
X501 4.00MHz
R509 1k
C504 0.1 50V MF
C503 0.1
C519 0.1
C520 0.1
C521 0.1
C522 0.1
C502 0.1
C501 100 6.3V
R506 10k
R501 10k
R502 10k
R503 10k
R504 10k
R505 10k
B501 1N4148M
R502 11ES2
R503 UZP-5.6BC
R576 2.2k 1/4W
R577 220 1/4W
R578 220 1/4W
R574 100 1/4W
R573 100 1/4W
R572 100 1/4W
R571 100 1/4W
R570 100 1/4W
S524 DISPLAY
S525 SLEEP
S526 TIMER SET
S527 CLOCK SET
S528 TIMER SELECT
S512 SYSTEM POWER
S513 FUNCTION
S514 VOLUME-
S515 VOLUME+
S516 DECK SELECT A B
S517 REC
S518
S519 TUNING MEMO
S520
S521 STEREO/MONO
S522
S523 TUNING MODE
S501 TAPE
S502 TUNER/BAND
S503 CD
S504 ENTER/NEXT
S505 OPEN/CLOSE CD
S506 REPEAT
S507 HI-SPEED DUBBING
S508 DIRECTION MODE
S509 DOLBY NR
S510 CD SYNCHRO
S511 PLAY MODE
CN501 16P B_TO_B
SB.OUT
SB.IN
SCK.IN
RBY
REQ.GM
RESET
D.GND
5.6V
VFDP (-25V)
VF
VF
D.GND
MAIN BOARD CN105
(Page 31)


【PANEL BOARD】
S512 SYSTEM POWER
S513 FUNCTION
S514 VOLUME
S519 TUNING MEMO
S520
S521 STEREO/MONO
S522
S523 TUNING MODE
S524 DISPLAY
S525 SLEEP
S526 TIMER SET
S527 CLOCK SET
S528 TIMER SELECT
IC501
X501
C502
C519
C520
R509
R534
JW501
JW502
JW503
JW504
JW505
JW506
JW507
JW508
JW509
JW510
JW511
JW512
JW513
JW514
JW515
JW516
JW517
JW518





02

● SEMICONDUCTOR LOCATION

Ref. No.	Location
D501	C-7
D502	C-7
D503	C-7
D504	C-6
D505	C-5
D506	C-6
D507	C-5
D508	C-3
D509	B-4
D510	B-3
D511	C5
D512	C4
D513	D-7
D514	C-6
D515	B-7
D516	D-9
D517	B-5
D518	C-5
D519	C-5
D520	C-4
D521	C-4
D522	C-3
D523	C-3
IC501	E-4
IC502	E-3
Q501	E-5
Q502	C-4
Q503	B-3
Q507	D-9
Q509	C-4

Note:

- ○— : parts extracted from the component side.
- ▒▒▒ : Pattern on the side which is seen.

SECTION 7
EXPLODED VIEWS

NOTE :

- -XX, -X mean standardized parts, so they may have some difference from the original one.
- Items marked " * "are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

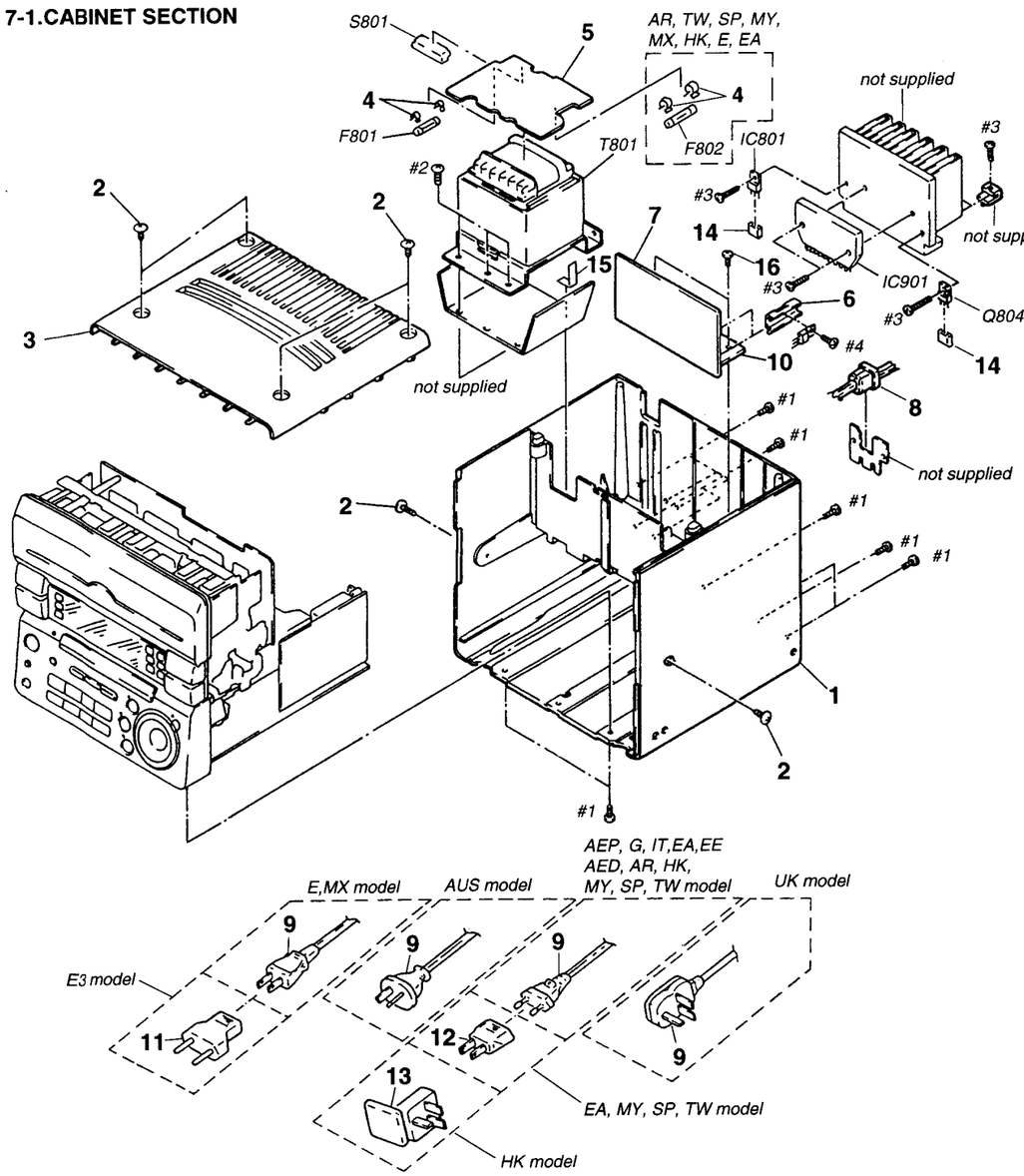
- The mechanical parts with no reference number in the exploded views are not supplied.
- Hardware (# mark) list and accessories and packing materials are given in the last of this parts list.
- Abbreviation

SP	: Singapore	AUS	: Australian	MX	: Mexican
HK	: Hong Kong	AR	: Argentine	IT	: Italian
G	: German	EA	: Saudi Arabia	TW	: Taiwan
MY	: Malaysia	EE	: East European		

E2 : Tuner Sections SW BAND do not exist.
E3 : Tuner Sections SW BAND exist.

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

7-1.CABINET SECTION

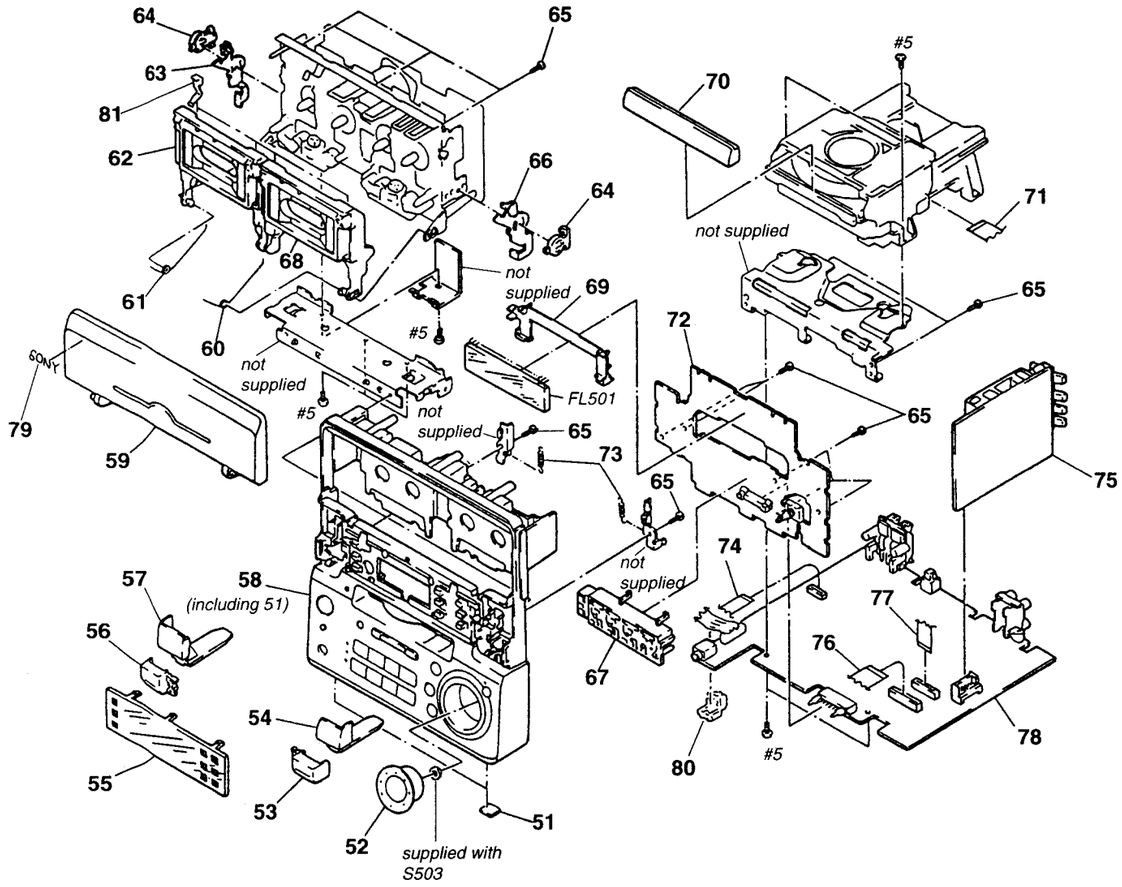


Ref. No.	Part No.	Description	Remark
* 1	4-977-369-21	CASE (H11 : AEP,UK,G,IT,EE,AUS)	
1	4-977-369-31	CASE (H11 : E,EA,AR,HK,MX,MY,SP,TW,TH)	
* 1	4-977-369-51	CASE (H11J)	
2	3-363-099-01	SCREW (CASE 3 TP2)	
3	4-977-370-11	PLATE, TOP (H11)	
3	4-977-370-31	PLATE, TOP (H11J)	
4	1-533-217-31	HOLDER, FUSE	
* 5	1-658-263-13	TRANSFORMER BOARD	
* 6	3-309-144-21	HEAT SINK	
* 7	A-4389-315-A	POWER BOARD, COMPLETE (H11 : AEP,UK,G, IT,E,EA, EE,AR,AUS,HK,TW)	
* 7	A-4389-403-A	POWER BOARD, COMPLETE (H11 : MX)	
* 7	A-4389-410-A	POWER BOARD, COMPLETE (H11 : MY,SP)	
* 7	A-4389-475-A	POWER BOARD, COMPLETE (H11J)	
8	3-703-244-11	BUSHING (2104), CORD (EXCEPT E,MX)	
8	3-703-571-00	BUSHING (S) (4516), CORD (E,MX)	
⚠ 9	1-558-943-41	CORD, POWER (E,MX)	
⚠ 9	1-575-651-21	CORD, POWER (AEP,G,IT,EA,EE,AR,HK,MY,SP, TW)	
⚠ 9	1-696-845-11	CORD, POWER (AUS)	
⚠ 9	1-751-522-11	CORD, POWER (UK)	

Ref. No.	Part No.	Description	Remark
* 10	A-4389-314-A	POWER AMP BOARD, COMPLETE (H11 : AEP, UK,G,IT, E,EA,EE,AR,AUS,HK,TW)	
* 10	A-4389-402-A	POWER AMP BOARD, COMPLETE (H11 : MX)	
* 10	A-4389-409-A	POWER AMP BOARD, COMPLETE (H11 : MY,SP)	
* 10	A-4389-474-A	POWER AMP BOARD, COMPLETE (H11J)	
11	1-569-007-11	ADAPTER, CONVERSION 2P (E3)	
12	1-569-008-11	ADAPTER, CONVERSION 2P (EA,MY,SP,TW)	
13	1-770-019-11	ADAPTOR, CONVERSION PLUG 3P (HK)	
* 14	3-923-762-11	HOLDER (TR)	
15	4-980-402-01	SHEET (T) (H11J)	
16	4-979-267-01	SCREW (3X16) (P) (TIGHT), +BV	
⚠ F801	1-532-279-00	FUSE, TIME LAG (T0.5AL/250V)	
⚠ F802	1-532-078-00	FUSE, TIME LAG (T1.0AL/250V) (E,EA,AR,HK, MX, MY,SP,TW)	
IC801	8-759-231-58	IC TA7812S	
IC901	8-749-920-19	IC STK4122MK2	
⚠ T801	1-429-450-11	TRANSFORMER, POWER (AEP,G,IT,EE,TH,UK)	
⚠ T801	1-429-451-11	TRANSFORMER, POWER (E,EA,AR,AUS,HK,MX, MY,SP,TW)	
⚠ S801	1-572-675-11	SWITCH, POWER VOLTAGE CHANGE (VOLTAGE SELECTOR) (E,EA,AR,HK,MX,MY,SP,TW)	

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

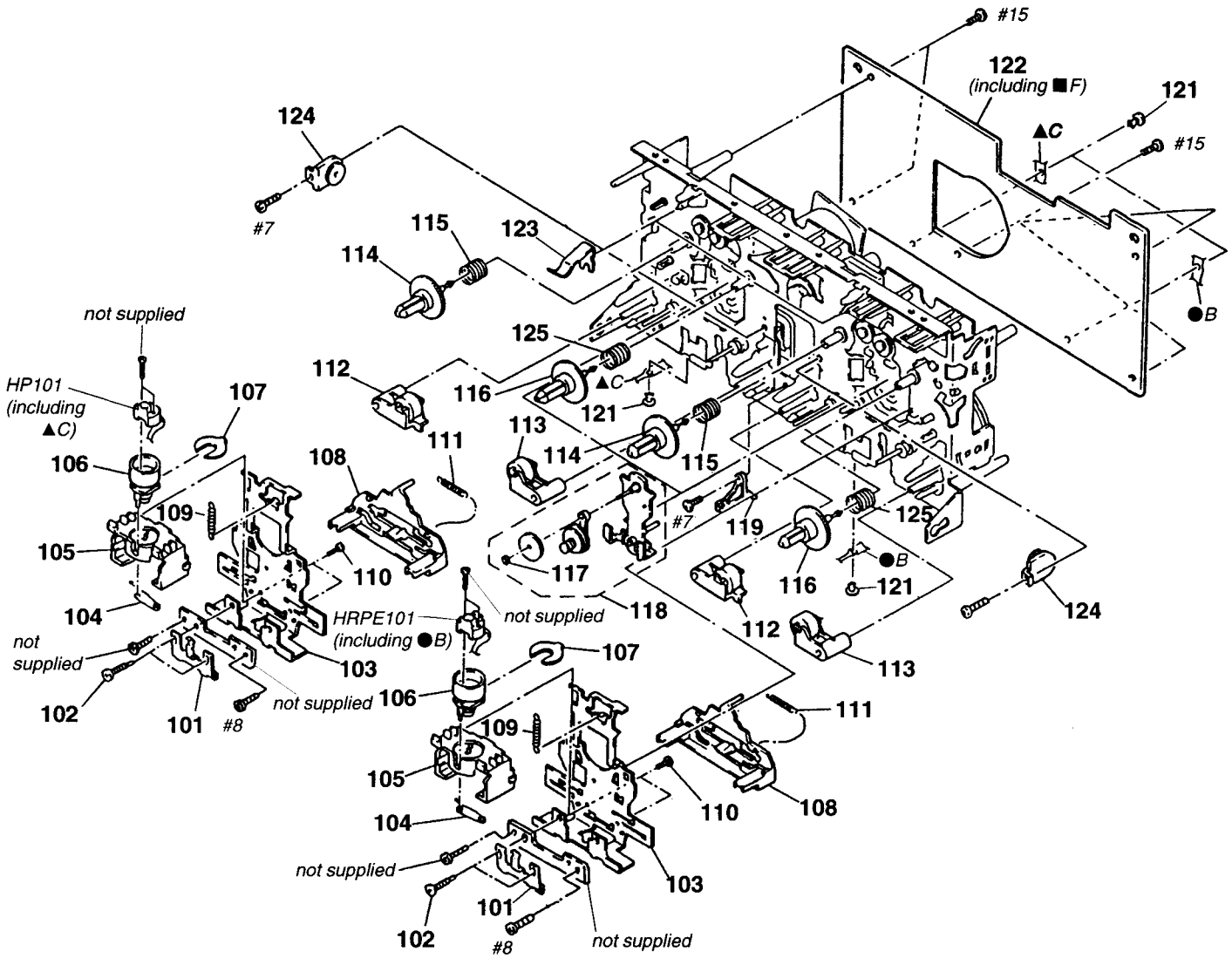
7-2.FRONT PANEL SECTION



Ref. No.	Part No.	Description	Remark
51	4-930-336-91	FOOT (FELT)	
52	4-977-402-11	KNOB (JOG) (H11)	
52	4-977-402-31	KNOB (JOG) (H11J)	
53	4-977-383-11	BUTTON (O/C) (H11)	
53	4-977-383-31	BUTTON (O/C) (H11J)	
54	4-977-398-11	BUTTON (EJ-R) (H11)	
54	4-977-398-31	BUTTON (EJ-R) (H11J)	
55	4-977-396-01	WINDOW (DIS) (H11J)	
55	4-977-396-11	WINDOW (DIS) (H11)	
56	4-977-382-11	BUTTON (TIM) (H11)	
56	4-977-382-31	BUTTON (TIM) (H11J)	
57	4-977-397-11	BUTTON (EJ-L) (H11)	
57	4-977-397-31	BUTTON (EJ-L) (H11J)	
58	X-4946-766-1	PANEL (W) ASSY, FRONT (H11)	
58	X-4946-817-1	PANEL (BJ) ASSY, FRONT (H11J)	
59	X-4946-767-1	LID (W) ASSY, CASSETTE (H11)	
59	X-4946-818-1	LID (BJ) ASSY, CASSETTE (H11J)	
60	4-959-232-01	SPRING (R), TORSION (H11J)	
60	4-959-232-11	SPRING (R), TORSION (H11)	
61	4-959-231-01	SPRING (L), TORSION (H11J)	
61	4-959-231-11	SPRING (L), TORSION (H11)	
62	X-4946-761-1	HOLDER (L) ASSY, CASSETTE (H11)	
62	X-4946-820-1	HOLDER (BL) ASSY, CASSETTE (H11J)	
* 63	3-367-709-01	LEVER (LOCK LEVER L) (H11J)	
63	3-367-709-21	LEVER (LOCK LEVER L) (H11)	
64	3-354-957-01	JOINT (LOCK LEVER)	
65	4-951-620-01	SCREW (2.6X8), +BVTP	
66	4-965-877-01	LEVER (LOCK LEVER R) (H11J)	
* 66	4-965-877-11	LEVER (LOCK LEVER R) (H11)	
* 67	4-977-399-01	HOUSE, LAMP (H11J)	
* 67	4-977-399-11	HOUSE, LAMP (H11)	
68	X-4946-760-1	HOLDER (R) ASSY, CASSETTE (H11)	
68	X-4946-819-1	HOLDER (BR) ASSY, CASSETTE (H11J)	
* 69	4-977-400-01	HOLDER (FL) (H11J)	
* 69	4-977-400-11	HOLDER (FL) (H11)	
70	4-977-401-11	PANEL, LOADING (H11)	
70	4-977-401-31	PANEL, LOADING (H11J)	
71	1-776-220-11	WIRE (FLAT TYPE) (19 CORE) (H11J)	

Ref. No.	Part No.	Description	Remark
71	1-777-061-11	WIRE (FLAT TYPE) (19 CORE) (H11)	
* 72	A-4389-325-A	PANEL BOARD, COMPLETE (H11 : AEP,UK,G,IT, E3,EA, EE,HK,TW)	
* 72	A-4389-398-A	PANEL BOARD, COMPLETE (H11 : E2,AR,AUS)	
* 72	A-4389-401-A	PANEL BOARD, COMPLETE (H11 : MX)	
* 72	A-4389-408-A	PANEL BOARD, COMPLETE (H11 : MY,SP)	
* 72	A-4389-473-A	PANEL BOARD, COMPLETE (H11J)	
73	4-977-392-01	SPRING (F), TENSION (H11J)	
73	4-977-392-11	SPRING (F), TENSION (H11)	
74	1-769-966-11	WIRE (FLAT TYPE) (11 CORE) (H11J)	
74	1-777-062-11	WIRE (FLAT TYPE) (11 CORE) (H11)	
* 75	A-4303-499-A	TCB BOARD, COMPLETE (H11J)	
* 75	A-4303-532-A	TCB BOARD, COMPLETE (H11 : AEP,UK)	
* 75	A-4303-533-A	TCB BOARD, COMPLETE (H11 : G,IT)	
* 75	A-4303-534-A	TCB BOARD, COMPLETE (H11 : E3,EA,MY,SP, TW,HK)	
* 75	A-4303-535-A	TCB BOARD, COMPLETE (H11 : E2,MX,AR,AUS)	
* 75	A-4303-536-A	TCB BOARD, COMPLETE (H11 : EE)	
76	1-773-167-11	WIRE (FLAT TYPE) (21 CORE) (H11J)	
76	1-777-060-11	WIRE (FLAT TYPE) (21 CORE) (H11)	
77	1-773-052-11	WIRE (FLAT TYPE) (17 CORE)	
* 78	A-4389-317-A	MAIN BOARD, COMPLETE (H11 : AEP,UK)	
* 78	A-4389-318-A	MAIN BOARD, COMPLETE (H11 : G)	
* 78	A-4389-319-A	MAIN BOARD, COMPLETE (H11 : IT)	
* 78	A-4389-329-A	MAIN BOARD, COMPLETE (H11 : E3,HK)	
* 78	A-4389-397-A	MAIN BOARD, COMPLETE (H11 : EE)	
* 78	A-4389-399-A	MAIN BOARD, COMPLETE (H11 : E2,AR)	
* 78	A-4389-400-A	MAIN BOARD, COMPLETE (H11 : EA,TW)	
* 78	A-4389-405-A	MAIN BOARD, COMPLETE (H11 : MX)	
* 78	A-4389-407-A	MAIN BOARD, COMPLETE (H11 : AUS)	
* 78	A-4389-412-A	MAIN BOARD, COMPLETE (H11 : MY, SP)	
* 78	A-4389-477-A	MAIN BOARD, COMPLETE (H11J)	
79	4-962-708-11	EMBLEM (4-A), SONY (H11)	
79	4-962-708-31	EMBLEM (4-A), SONY (H11J)	
80	1-543-738-41	CORE, RING (AEP,G,IT,EE,UK)	
81	4-959-229-11	DETENT, CASSETTE (H11)	
FL501	1-517-473-11	INDICATOR TUBE, FLUORESCENT	

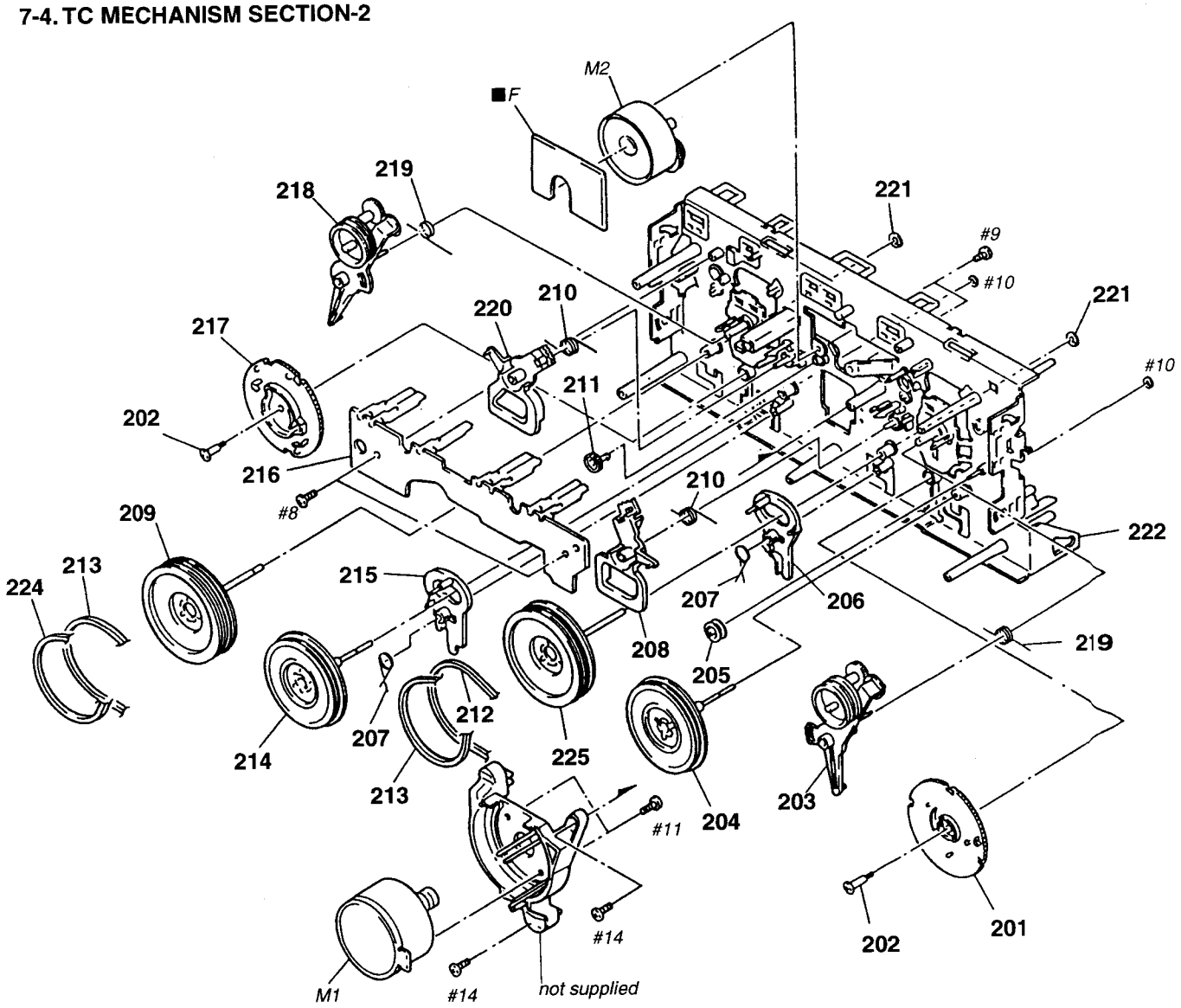
7-3. TC MECHANISM SECTION-1



Ref. No.	Part No.	Description	Remark
101	3-908-560-01	SPRING, AZIMUTH ADJUSTMENT	
102	3-919-684-01	SCREW, AZIMUTH ADJUSTMENT	
* 103	X-3367-584-2	SLIDER (HEAD) ASSY	
104	3-908-556-01	SPRING, HEAD TOGGLE	
105	3-908-558-02	FITTING BLOCK, HEAD	
106	3-908-557-02	ROTARY BLOCK, HEAD	
* 107	3-908-559-01	STOPPER, AZIMUTH	
108	3-908-555-01	SLIDER (REV SLIDER)	
109	3-917-143-11	SPRING, TENSION	
110	3-388-848-01	SCREW (P2X6) (B TIGHT)	
111	3-911-113-01	SPRING, TENSION	
112	X-3370-643-1	PINCH LEVER (REV) ASSY	
113	X-3367-588-1	PINCH LEVER (FWD) ASSY	

Ref. No.	Part No.	Description	Remark
114	3-908-613-01	GEAR (S), REEL	
115	3-917-141-01	SPRING, COMPRESSION	
116	X-3371-305-1	REEL (T) ASSY	
117	3-669-465-01	WASHER (1.5), STOPPER	
118	X-3370-173-1	TU ASSY	
* 119	4-980-439-01	FULCRUM, HOLDER	
121	3-911-116-21	RIVET, PUSH	
122	A-2007-131-A	AUDIO BOARD, COMPLETE	
123	3-930-972-01	DETENT, HALF	
124	3-354-963-01	DAMPER	
125	3-917-142-01	SPRING, COMPRESSION	
HP101	1-500-093-11	HEAD, MAGNETIC (PLAYBACK)	
HRPE101	1-500-094-11	HEAD, MAGNETIC (REC/PB/ERASE)	

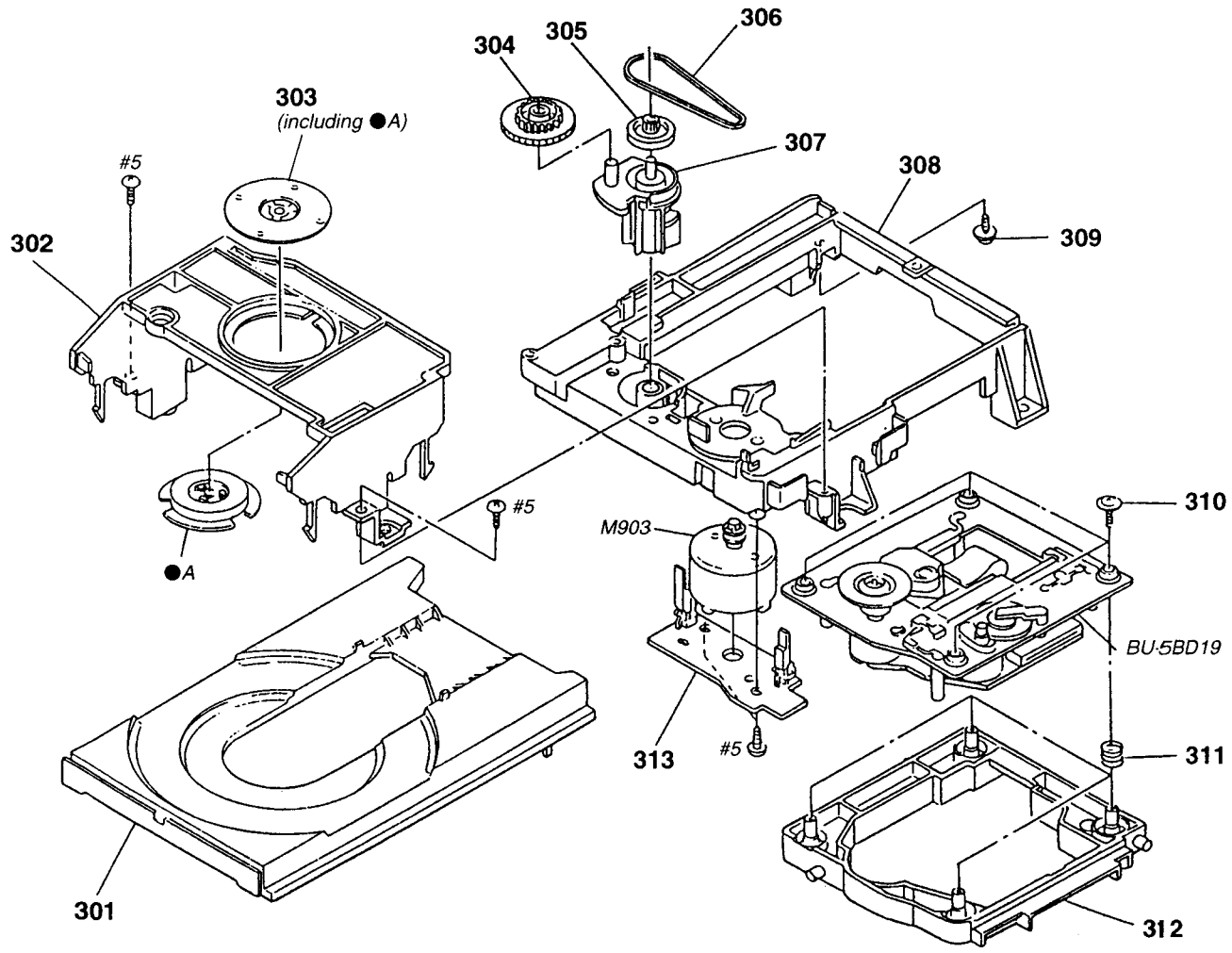
7-4. TC MECHANISM SECTION-2



Ref. No.	Part No.	Description	Remark
201	3-908-597-01	CAM (A)	
202	3-908-608-11	SCREW, STEP	
203	X-3367-590-2	ARM (A) ASSY, FR	
204	X-3370-169-1	FLYWHEEL (AR) ASSY	
205	3-928-047-01	PULLEY, TENSION	
206	3-908-599-01	LEVER (REV-A)	
207	3-908-601-01	SPRING (REV LEVER), TORSION	
208	3-908-603-01	LEVER (TRIGGER A)	
209	X-3367-593-1	FLYWHEEL (BF) ASSY	
210	3-908-605-01	SPRING (TRIGGER), TORSION	
211	3-908-609-01	GEAR, TRIGGER	
212	3-913-845-11	BELT (A)	
213	3-913-846-11	BELT (FR)	

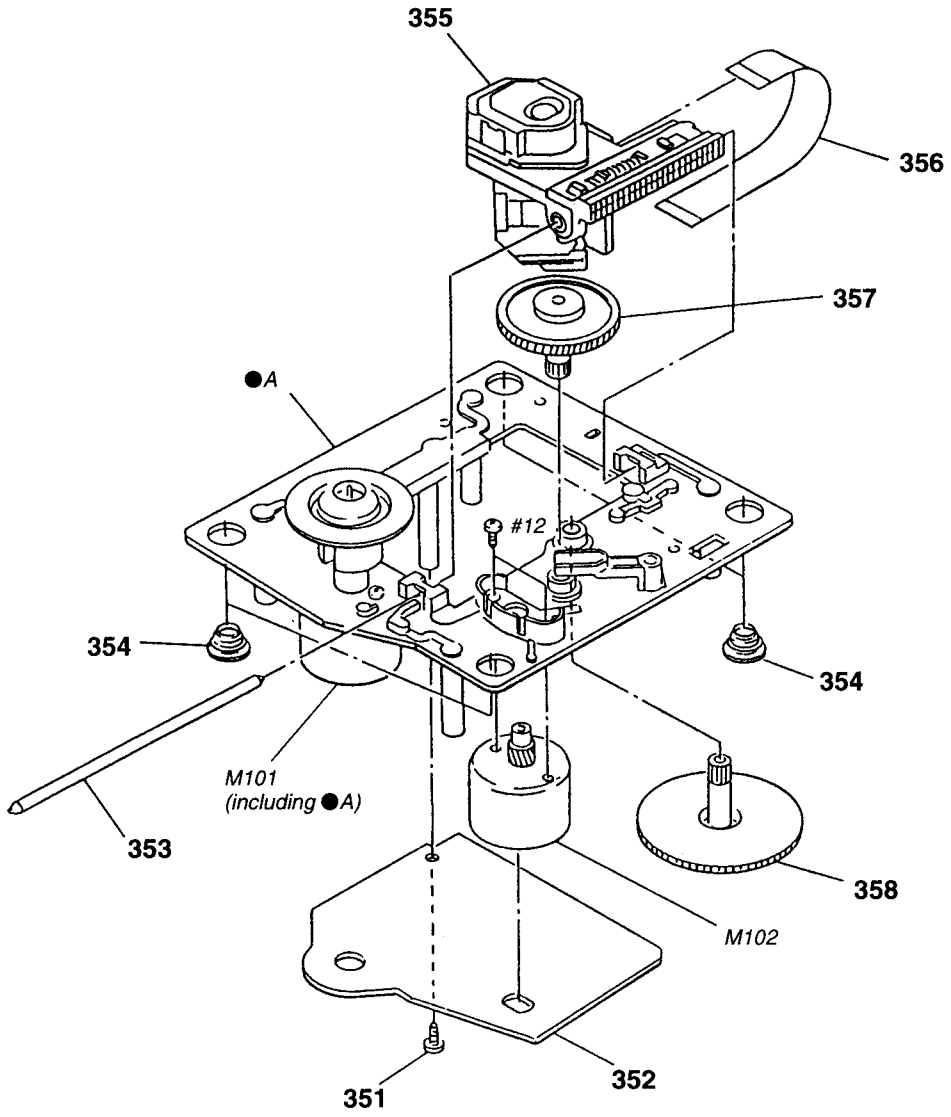
Ref. No.	Part No.	Description	Remark
214	X-3370-171-1	FLYWHEEL (BR) ASSY	
215	3-908-600-01	LEVER (REV-B)	
* 216	1-650-669-11	LEAF SWITCH BOARD	
217	3-908-598-01	CAM (B)	
218	X-3369-849-2	ARM (B) ASSY, FR	
219	3-914-111-01	SPRING (FR), TORSION	
220	3-908-604-01	LEVER (TRIGGER B)	
221	3-911-115-01	WASHER, STOPPER	
222	X-3371-441-1	CHASSIS ASSY	
224	3-917-176-11	BELT (B)	
225	X-3370-172-1	FLYWHEEL (AF) ASSY	
M1	A-2004-409-A	MOTOR ASSY, CAPSTAN (CAPSTAN)	
M2	A-2004-410-A	MOTOR ASSY, DC (TRIGGER)	

7-5. CD MECHANISM SECTION-1



Ref. No.	Part No.	Description	Remark
301	4-960-836-01	TABLE, DISC	
302	4-960-835-01	HOLDER (M)	
303	1-452-719-11	MAGNET ASSY	
304	4-960-842-01	GEAR (P)	
305	4-960-841-01	PULLEY (S)	
306	4-927-649-01	BELT	
* 307	4-960-839-01	CAM	
308	4-960-838-03	BASE (MD)	
309	4-917-583-21	BRACKET, YOKE	
310	4-933-134-01	SCREW (+PTPWH M2.6X6)	
311	4-959-996-01	SPRING (932), COMPRESSION	
312	4-960-834-01	HOLDER (BU)	
* 313	1-650-836-11	LOADING BOARD	
M903	A-4604-363-A	MOTOR (L) ASSY (LOADING)	

7-6. CD MECHANISM SECTION-2



The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

Ref. No.	Part No.	Description	Remark
351	4-951-620-01	SCREW (2.6X8), +BVTP	
* 352	A-4673-402-A	BD BOARD, COMPLETE	
353	4-917-565-01	SHAFT, SLED	
354	4-951-940-01	INSULATOR (BU)	
⚠ 355	8-848-387-11	OPTICAL PICK-UP KSS-213BA/S-N	
356	1-769-069-11	WIRE (FLAT TYPE) (16 CORE)	
357	4-917-567-01	GEAR (M)	
358	4-917-564-01	GEAR (P), FLATNESS	
M101	X-4917-523-4	MOTOR ASSY (SPINDLE)	
M102	X-4917-504-1	MOTOR ASSY (SLED)	

SECTION 8

ELECTRICAL PARTS LIST

AUDIO

NOTE :

- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
- -XX, -X mean standardized parts, so they may have some difference from the original one.
- RESISTORS
  All resistors are in ohms
  METAL : Metal-film resistor
  METAL OXIDE :Metal oxide-film resistor
  F : nonflammable
- Items marked " * "are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

- SEMICONDUCTORS
  In each case, u : μ , for example :
  uA.... : μ A.... , uPA.... : μ PA....
  uPB.... : μ PB.... , uPC.... : μ PC....
  uPD.... : μ PD....
- CAPACITORS
  uF : μ F
- COILS
  uH : μ H
- Abbreviation

SP	: Singapore	AUS	: Australian		
HK	: Hong Kong	AR	: Argentine	MX	: Mexican
G	: German	EA	: Saudi Arabia	IT	: Italian
MY	: Malaysia	EE	: East European	TW	: Taiwan

E2 : Tuner Sections SW BAND do not exist.
E3 : Tuner Sections SW BAND exist.

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

When indicating parts by reference number, please include the board.

Ref. No.	Part No.	Description				Remark
	A-2007-131-A	AUDIO BOARD, COMPLETE				
		**********				
		< CAPACITOR >				
C301	1-162-289-31	CERAMIC	390PF	10%	50V	
C302	1-126-968-11	ELECT	100uF	20%	6.3V	
C303	1-162-282-31	CERAMIC	100PF	10%	50V	
C304	1-130-483-00	MYLAR	0.01uF	5%	50V	
C305	1-107-715-11	ELECT	22uF	20%	16V	
C311	1-162-289-31	CERAMIC	390PF	10%	50V	
C313	1-162-282-31	CERAMIC	100PF	10%	50V	
C314	1-130-487-00	MYLAR	0.022uF	5%	50V	
C315	1-126-233-11	ELECT	22uF	20%	50V	
C331	1-137-427-11	FILM	120PF	5%	50V	
C332	1-162-288-31	CERAMIC	330PF	10%	50V	
C333	1-162-209-31	CERAMIC	27PF	5%	50V	
C401	1-162-289-31	CERAMIC	390PF	10%	50V	
C402	1-126-968-11	ELECT	100uF	20%	6.3V	
C403	1-162-282-31	CERAMIC	100PF	10%	50V	
C404	1-130-483-00	MYLAR	0.01uF	5%	50V	
C405	1-107-715-11	ELECT	22uF	20%	16V	
C411	1-162-289-31	CERAMIC	390PF	10%	50V	
C413	1-162-282-31	CERAMIC	100PF	10%	50V	
C414	1-130-487-00	MYLAR	0.022uF	5%	50V	
C415	1-126-233-11	ELECT	22uF	20%	50V	
C431	1-137-427-11	FILM	120PF	5%	50V	
C432	1-162-288-31	CERAMIC	330PF	10%	50V	
C433	1-162-209-31	CERAMIC	27PF	5%	50V	
C601	1-126-157-11	ELECT	10uF	20%	16V	
C602	1-126-157-11	ELECT	10uF	20%	16V	
C611	1-124-907-11	ELECT	10uF	20%	50V	
C612	1-124-907-11	ELECT	10uF	20%	50V	
C621	1-137-150-11	FILM	0.01uF	5%	100V	
C622	1-126-961-11	ELECT	2.2uF	20%	50V	
C623	1-136-155-00	FILM	0.015uF	5%	50V	
C624	1-130-481-00	MYLAR	0.0068uF	5%	50V	
C625	1-130-481-00	MYLAR	0.0068uF	5%	50V	
C627	1-124-903-11	ELECT	1uF	20%	50V	
C628	1-136-153-00	FILM	0.01uF	5%	50V	
C642	1-104-664-11	ELECT	47uF	20%	16V	
C651	1-161-494-00	CERAMIC	0.022uF		25V	
		< CONNECTOR >				
* CN601	1-568-864-11	SOCKET, CONNECTOR 21P				
* CN602	1-564-718-11	PIN, CONNECTOR (SMALL TYPE) 2P				
* CN651	1-564-521-11	PLUG, CONNECTOR 6P				
		< IC >				
IC601	8-759-111-44	IC UPC4570C-1				
IC602	8-759-143-54	IC UPC1330HA				
IC611	8-759-111-44	IC UPC4570C-1				
		< COIL >				
L331	1-410-780-11	INDUCTOR	27mH			
L431	1-410-780-11	INDUCTOR	27mH			
		< TRANSISTOR >				
Q621	8-729-142-46	TRANSISTOR	2SC2001-LK			
Q622	8-729-142-46	TRANSISTOR	2SC2001-LK			
Q623	8-729-801-93	TRANSISTOR	2SD1387			
Q651	8-729-900-65	TRANSISTOR	DTA144ES			
		< RESISTOR >				
R301	1-247-881-00	CARBON	120K	5%	1/4W	
R302	1-249-409-11	CARBON	220	5%	1/4W	
R303	1-249-433-11	CARBON	22K	5%	1/4W	
R304	1-247-889-00	CARBON	270K	5%	1/4W	
R305	1-247-858-11	CARBON	13K	5%	1/4W	
R311	1-247-881-00	CARBON	120K	5%	1/4W	
R312	1-247-807-31	CARBON	100	5%	1/4W	
R314	1-247-882-11	CARBON	130K	5%	1/4W	
R315	1-247-850-11	CARBON	6.2K	5%	1/4W	
R331	1-249-430-11	CARBON	12K	5%	1/4W	
R401	1-247-881-00	CARBON	120K	5%	1/4W	
R402	1-249-409-11	CARBON	220	5%	1/4W	
R403	1-249-433-11	CARBON	22K	5%	1/4W	
R404	1-247-889-00	CARBON	270K	5%	1/4W	
R405	1-247-858-11	CARBON	13K	5%	1/4W	

AUDIO BD

Ref. No.	Part No.	Description			Remark
R411	1-247-881-00	CARBON	120K	5%	1/4W
R412	1-247-807-31	CARBON	100	5%	1/4W
R414	1-247-882-11	CARBON	130K	5%	1/4W
R415	1-247-850-11	CARBON	6.2K	5%	1/4W
R431	1-249-430-11	CARBON	12K	5%	1/4W
R601	1-249-409-11	CARBON	220	5%	1/4W
R602	1-249-409-11	CARBON	220	5%	1/4W
R608	1-249-409-11	CARBON	220	5%	1/4W
R609	1-249-433-11	CARBON	22K	5%	1/4W
R611	1-249-409-11	CARBON	220	5%	1/4W
R612	1-249-409-11	CARBON	220	5%	1/4W
⚠ R621	1-212-851-00	FUSIBLE	5.6	5%	1/4W F
⚠ R622	1-212-851-00	FUSIBLE	5.6	5%	1/4W F
R623	1-249-432-11	CARBON	18K	5%	1/4W
R624	1-249-432-11	CARBON	18K	5%	1/4W
R625	1-249-429-11	CARBON	10K	5%	1/4W
R651	1-247-856-00	CARBON	11K	5%	1/4W
R652	1-247-856-00	CARBON	11K	5%	1/4W
R653	1-249-441-11	CARBON	100K	5%	1/4W
		< VARIABLE RESISTOR >			
RV301	1-238-598-11	RES, ADJ, CARBON 2.2K (PB LEVEL L) (DECK B)			
RV311	1-238-598-11	RES, ADJ, CARBON 2.2K (PB LEVEL L) (DECK A)			
RV341	1-238-551-11	RES, ADJ, CARBON 220K (REC BIAS L)			
RV401	1-238-598-11	RES, ADJ, CARBON 2.2K (PB LEVEL R) (DECK B)			
RV411	1-238-598-11	RES, ADJ, CARBON 2.2K (PB LEVEL R) (DECK A)			
RV441	1-238-551-11	RES, ADJ, CARBON 220K (REC BIAS R)			
RV651	1-238-599-11	RES, ADJ, CARBON 4.7K (TAPE SPEED NORMAL)			
RV652	1-238-599-11	RES, ADJ, CARBON 4.7K (TAPE SPEED HIGH)			
		< TRANSFORMER >			
T621	1-423-980-11	TRANSFORMER, BIAS OSCILLATION			

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*	A-4673-402-A	BD BOARD, COMPLETE			
		**********			
		< CAPACITOR >			
C101	1-126-607-11	ELECT CHIP	47uF	20%	4V
C102	1-163-275-11	CERAMIC CHIP	0.001uF	5%	50V
C103	1-164-346-11	CERAMIC CHIP	1uF		16V
C105	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C106	1-164-695-11	CERAMIC CHIP	0.0022uF	5%	50V
C107	1-164-695-11	CERAMIC CHIP	0.0022uF	5%	50V
C108	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C109	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C110	1-163-989-11	CERAMIC CHIP	0.033uF	10%	25V
C111	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C112	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C127	1-164-695-11	CERAMIC CHIP	0.0022uF	5%	50V
C128	1-163-135-00	CERAMIC CHIP	560PF	5%	50V
C129	1-163-038-91	CERAMIC CHIP	0.1uF		25V

Ref. No.	Part No.	Description			Remark
C130	1-164-336-11	CERAMIC CHIP	0.33uF		25V
C131	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C132	1-163-037-11	CERAMIC CHIP	0.022uF	10%	25V
C133	1-163-145-00	CERAMIC CHIP	0.0015uF	5%	50V
C134	1-164-346-11	CERAMIC CHIP	1uF		16V
C135	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C136	1-164-005-11	CERAMIC CHIP	0.47uF		25V
C137	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C139	1-163-235-11	CERAMIC CHIP	22PF	5%	50V
C140	1-163-235-11	CERAMIC CHIP	22PF	5%	50V
C141	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C142	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C145	1-135-201-11	TANTALUM CHIP	10uF	20%	4V
C146	1-135-201-11	TANTALUM CHIP	10uF	20%	4V
C147	1-163-275-11	CERAMIC CHIP	0.001uF	5%	50V
C148	1-163-275-11	CERAMIC CHIP	0.001uF	5%	50V
C149	1-164-346-11	CERAMIC CHIP	1uF		16V
C153	1-135-259-11	TANTAL. CHIP	10uF	20%	6.3V
C154	1-163-235-11	CERAMIC CHIP	22PF	5%	50V
		< CONNECTOR >			
CNU101	1-770-014-11	CONNECTOR, FFC/FPC 16P			
CNU102	1-770-013-11	CONNECTOR, FFC/FPC 19P			
		< IC >			
IC101	8-752-069-56	IC CXA1782BQ			
IC102	8-759-291-06	IC BA6397FP			
IC103	8-752-372-94	IC CXD2507AQ			
IC104	8-759-185-29	IC PCM1710U-B			
		< TRANSISTOR >			
Q101	8-729-010-08	TRANSISTOR MSB710-R			
Q102	8-729-424-08	TRANSISTOR UN2111			
Q103	8-729-421-22	TRANSISTOR UN2211			
		< RESISTOR >			
R102	1-216-001-00	METAL CHIP	10	5%	1/10W
R103	1-216-049-91	METAL GLAZE	1K	5%	1/10W
R104	1-216-097-91	METAL GLAZE	100K	5%	1/10W
R105	1-216-093-00	METAL CHIP	68K	5%	1/10W
R106	1-216-093-00	METAL CHIP	68K	5%	1/10W
R107	1-216-093-00	METAL CHIP	68K	5%	1/10W
R108	1-216-093-00	METAL CHIP	68K	5%	1/10W
R109	1-216-097-91	METAL GLAZE	100K	5%	1/10W
R112	1-216-083-00	METAL CHIP	27K	5%	1/10W
R113	1-216-083-00	METAL CHIP	27K	5%	1/10W
R114	1-216-101-00	METAL CHIP	150K	5%	1/10W
R115	1-216-101-00	METAL CHIP	150K	5%	1/10W
R116	1-216-061-00	METAL CHIP	3.3K	5%	1/10W
R117	1-216-069-00	METAL CHIP	6.8K	5%	1/10W
R118	1-216-049-91	METAL GLAZE	1K	5%	1/10W

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

Ref. No.	Part No.	Description			Remark
R119	1-216-089-91	METAL GLAZE	47K	5%	1/10W
R120	1-216-089-91	METAL GLAZE	47K	5%	1/10W
R121	1-216-114-00	METAL GLAZE	510K	5%	1/10W
R122	1-216-097-91	METAL GLAZE	100K	5%	1/10W
R123	1-216-099-00	METAL CHIP	120K	5%	1/10W
R124	1-216-091-00	METAL CHIP	56K	5%	1/10W
R125	1-216-069-00	METAL CHIP	6.8K	5%	1/10W
R126	1-216-063-91	METAL GLAZE	3.9K	5%	1/10W
R127	1-216-089-91	METAL GLAZE	47K	5%	1/10W
R128	1-216-105-91	METAL GLAZE	220K	5%	1/10W
R129	1-216-049-91	METAL GLAZE	1K	5%	1/10W
R130	1-216-079-00	METAL CHIP	18K	5%	1/10W
R131	1-216-079-00	METAL CHIP	18K	5%	1/10W
R132	1-216-061-00	METAL CHIP	3.3K	5%	1/10W
R133	1-216-061-00	METAL CHIP	3.3K	5%	1/10W
R134	1-216-065-00	METAL CHIP	4.7K	5%	1/10W
R135	1-216-065-00	METAL CHIP	4.7K	5%	1/10W
R136	1-216-073-00	METAL CHIP	10K	5%	1/10W
R137	1-216-065-00	METAL CHIP	4.7K	5%	1/10W
R138	1-216-049-91	METAL GLAZE	1K	5%	1/10W
R139	1-216-033-00	METAL CHIP	220	5%	1/10W
R140	1-216-081-00	METAL CHIP	22K	5%	1/10W
R141	1-216-061-00	METAL CHIP	3.3K	5%	1/10W
R142	1-216-061-00	METAL CHIP	3.3K	5%	1/10W
R143	1-216-121-91	METAL GLAZE	1M	5%	1/10W
R144	1-216-073-00	METAL CHIP	10K	5%	1/10W
R145	1-216-097-91	METAL GLAZE	100K	5%	1/10W
R146	1-216-097-91	METAL GLAZE	100K	5%	1/10W
R147	1-216-049-91	METAL GLAZE	1K	5%	1/10W
R148	1-216-049-91	METAL GLAZE	1K	5%	1/10W
R149	1-216-049-91	METAL GLAZE	1K	5%	1/10W
R150	1-216-037-00	METAL CHIP	330	5%	1/10W
R151	1-216-037-00	METAL CHIP	330	5%	1/10W
R152	1-216-037-00	METAL CHIP	330	5%	1/10W
R153	1-216-082-00	METAL GLAZE	24K	5%	1/10W
R154	1-216-065-00	METAL CHIP	4.7K	5%	1/10W
R156	1-216-085-00	METAL CHIP	33K	5%	1/10W
R157	1-216-069-00	METAL CHIP	6.8K	5%	1/10W
R158	1-216-001-00	METAL CHIP	10	5%	1/10W
		< VARIABLE RESISTOR >			
RV101	1-241-396-11	RES, ADJ, METAL GLAZE 22K (FOCUS BIAS)			
RV102	1-241-396-11	RES, ADJ, METAL GLAZE 22K (FOCUS GAIN)			
RV103	1-241-396-11	RES, ADJ, METAL GLAZE 22K (TRACKING GAIN)			
		< SWITCH >			
S101	1-572-085-11	SWITCH, LEAF (LIMIT)			
		< VIBRATOR >			
X101	1-579-280-11	VIBRATOR, CRYSTAL (16.9344MHz)			

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Ref. No.	Part No.	Description			Remark
*	1-650-669-11	LEAF SWITCH BOARD			
		**********			
		< CONNECTOR >			
* CN1001	1-568-854-11	SOCKET, CONNECTOR 11P			
		< TRANSISTOR >			
Q1001	8-749-010-90	TRANSISTOR	NJL5165KA-H2		
Q1002	8-749-010-90	TRANSISTOR	NJL5165KA-H2		
		< RESISTOR >			
R1001	1-249-412-11	CARBON	390	5%	1/4W
R1002	1-249-412-11	CARBON	390	5%	1/4W
R1003	1-249-414-11	CARBON	560	5%	1/4W
R1004	1-247-834-11	CARBON	1.3K	5%	1/4W
R1005	1-247-818-11	CARBON	300	5%	1/4W
		< SWITCH >			
S1001	1-692-832-11	SWITCH, PUSH (1 KEY) (A PLAY)			
S1002	1-692-832-11	SWITCH, PUSH (1 KEY) (B PLAY)			
S1003	1-572-248-11	SWITCH, LEAF (A HALF)			
S1004	1-571-281-21	SWITCH, LEAF (A CrO2)			
S1005	1-571-281-21	SWITCH, LEAF (REC A)			
S1006	1-572-248-11	SWITCH, LEAF (B HALF)			
S1008	1-571-281-21	SWITCH, LEAF (B CrO2)			
S1009	1-571-281-21	SWITCH, LEAF (REC B)			

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*	1-650-836-11	LOADING BOARD			
		**********			
		< CONNECTOR >			
* CN291	1-568-943-11	PIN, CONNECTOR 5P			
		< SWITCH >			
S291	1-572-086-11	SWITCH, LEAF (LOAD OUT)			
S292	1-572-086-11	SWITCH, LEAF (LOAD IN)			

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MAIN

Ref. No.	Part No.	Description			Remark
*	A-4389-317-A	MAIN BOARD, COMPLETE (H11 : AEP,UK)			
*	A-4389-318-A	MAIN BOARD, COMPLETE (H11 : G)			
*	A-4389-319-A	MAIN BOARD, COMPLETE (H11 : IT)			
*	A-4389-329-A	MAIN BOARD, COMPLETE (H11 : E3,HK)			
*	A-4389-397-A	MAIN BOARD, COMPLETE (H11 : EE)			
*	A-4389-399-A	MAIN BOARD, COMPLETE (H11 : E2,AR)			
*	A-4389-400-A	MAIN BOARD, COMPLETE (H11 : EA,TW)			
*	A-4389-405-A	MAIN BOARD, COMPLETE (H11 : MX)			
*	A-4389-407-A	MAIN BOARD, COMPLETE (H11 : AUS)			
*	A-4389-412-A	MAIN BOARD, COMPLETE (H11 : MY,SP)			
*	A-4389-477-A	MAIN BOARD, COMPLETE (H11J)			
		**********			
		< CAPACITOR >			
C101	1-163-809-11	CERAMIC CHIP	0.047uF	10%	25V
C102	1-164-489-11	CERAMIC CHIP	0.22uF	10%	16V
C103	1-163-019-00	CERAMIC CHIP	0.0068uF	10%	50V
C104	1-163-989-11	CERAMIC CHIP	0.033uF	10%	25V
C105	1-163-017-00	CERAMIC CHIP	0.0047uF	5%	50V
C106	1-164-489-11	CERAMIC CHIP	0.22uF	10%	16V
C107	1-164-492-11	CERAMIC CHIP	0.15uF	10%	16V
C108	1-126-964-11	ELECT	10uF	20%	50V
C110	1-163-031-11	CERAMIC CHIP	0.01uF		50V
C111	1-163-031-11	CERAMIC CHIP	0.01uF		50V
C112	1-163-031-11	CERAMIC CHIP	0.01uF		50V
C113	1-163-031-11	CERAMIC CHIP	0.01uF		50V
C114	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C115	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C121	1-162-306-11	CERAMIC	0.01uF	30%	16V
C122	1-162-306-11	CERAMIC	0.01uF	30%	16V
C123	1-162-306-11	CERAMIC	0.01uF	30%	16V
C124	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C125	1-126-964-11	ELECT	10uF	20%	50V
C126	1-126-933-11	ELECT	100uF	20%	10V
C127	1-126-933-11	ELECT	100uF	20%	10V
C130	1-163-231-11	CERAMIC CHIP	15PF	5%	50V
C131	1-163-234-11	CERAMIC CHIP	20PF	5%	50V
C132	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C133	1-136-165-00	FILM	0.1uF	5%	50V
C135	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C136	1-104-656-11	ELECT	2200uF	20%	6.3V
C137	1-126-964-11	ELECT	10uF	20%	50V
C138	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C139	1-126-965-11	ELECT	22uF	20%	50V
C140	1-164-159-11	CERAMIC	0.1uF		50V
C141	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C144	1-164-159-11	CERAMIC	0.1uF		50V
C145	1-164-159-11	CERAMIC	0.1uF		50V
C147	1-126-964-11	ELECT	10uF	20%	50V
C148	1-163-037-11	CERAMIC CHIP	0.022uF	10%	25V
C149	1-163-809-11	CERAMIC CHIP	0.047uF	10%	25V
C150	1-126-964-11	ELECT	10uF	20%	50V
C151	1-163-809-11	CERAMIC CHIP	0.047uF	10%	25V
C152	1-164-489-11	CERAMIC CHIP	0.22uF	10%	16V
C153	1-163-019-00	CERAMIC CHIP	0.0068uF	10%	50V
C154	1-163-989-11	CERAMIC CHIP	0.033uF	10%	25V
C155	1-163-017-00	CERAMIC CHIP	0.0047uF	5%	50V
C156	1-164-489-11	CERAMIC CHIP	0.22uF	10%	16V
C157	1-164-492-11	CERAMIC CHIP	0.15uF	10%	16V
C158	1-126-964-11	ELECT	10uF	20%	50V
C171	1-126-964-11	ELECT	10uF	20%	50V
C172	1-109-889-11	ELECT	1uF	20%	50V
C173	1-109-889-11	ELECT	1uF	20%	50V
C174	1-126-964-11	ELECT	10uF	20%	50V
C175	1-164-159-11	CERAMIC	0.1uF		50V
C176	1-126-964-11	ELECT	10uF	20%	50V
C177	1-164-159-11	CERAMIC	0.1uF		50V
C178	1-164-159-11	CERAMIC	0.1uF		50V
C179	1-164-159-11	CERAMIC	0.1uF		50V
C180	1-126-952-11	ELECT	1000uF	20%	16V
C181	1-164-159-11	CERAMIC	0.1uF		50V
C201	1-162-290-31	CERAMIC	470PF	10%	50V
C202	1-163-005-11	CERAMIC CHIP	470PF	10%	50V
C203	1-162-290-31	CERAMIC	470PF	10%	50V
C204	1-164-159-11	CERAMIC	0.1uF		50V
C205	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C206	1-163-005-11	CERAMIC CHIP	470PF	10%	50V
C207	1-163-005-11	CERAMIC CHIP	470PF	10%	50V
C208	1-163-001-11	CERAMIC CHIP	220PF	10%	50V
C209	1-162-290-31	CERAMIC	470PF	10%	50V
C211	1-162-302-11	CERAMIC	0.0022uF	30%	16V
C212	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C213	1-163-005-11	CERAMIC CHIP	470PF	10%	50V
C215	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C216	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C401	1-163-001-11	CERAMIC CHIP	220PF	10%	50V
C402	1-130-479-00	MYLAR	0.0047uF	5%	50V
C403	1-164-161-11	CERAMIC CHIP	0.0022uF	10%	100V
C404	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C405	1-126-964-11	ELECT	10uF	20%	50V
C406	1-124-903-11	ELECT	1uF	20%	50V
C407	1-124-902-00	ELECT	0.47uF	20%	50V
C408	1-126-964-11	ELECT	10uF	20%	50V
C409	1-126-964-11	ELECT	10uF	20%	50V
C410	1-164-161-11	CERAMIC CHIP	0.0022uF	10%	100V
C411	1-124-903-11	ELECT	1uF	20%	50V
C412	1-163-001-11	CERAMIC CHIP	220PF	10%	50V
C421	1-126-964-11	ELECT	10uF	20%	50V
C422	1-126-933-11	ELECT	100uF	20%	10V
C423	1-126-933-11	ELECT	100uF	20%	10V
C424	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C425	1-163-031-11	CERAMIC CHIP	0.01uF		50V
C426	1-163-031-11	CERAMIC CHIP	0.01uF		50V
C427	1-126-935-11	ELECT	470uF	20%	16V

Ref. No.	Part No.	Description			Remark
C428	1-104-665-11	ELECT	100uF	20%	25V
C430	1-126-964-11	ELECT	10uF	20%	50V
C431	1-126-964-11	ELECT	10uF	20%	50V
C434	1-163-031-11	CERAMIC CHIP	0.01uF		50V
C435	1-163-031-11	CERAMIC CHIP	0.01uF		50V
C451	1-162-286-31	CERAMIC	220PF	10%	50V
C452	1-130-479-00	MYLAR	0.0047uF	5%	50V
C453	1-164-161-11	CERAMIC CHIP	0.0022uF	10%	100V
C454	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C455	1-126-964-11	ELECT	10uF	20%	50V
C456	1-124-903-11	ELECT	1uF	20%	50V
C457	1-124-902-00	ELECT	0.47uF	20%	50V
C458	1-126-964-11	ELECT	10uF	20%	50V
C459	1-126-964-11	ELECT	10uF	20%	50V
C460	1-164-161-11	CERAMIC CHIP	0.0022uF	10%	100V
C461	1-124-903-11	ELECT	1uF	20%	50V
C462	1-163-001-11	CERAMIC CHIP	220PF	10%	50V
C701	1-163-001-11	CERAMIC CHIP	220PF	10%	50V
C702	1-126-964-11	ELECT	10uF	20%	50V
C703	1-164-182-11	CERAMIC CHIP	0.0033uF	10%	50V
C706	1-126-964-11	ELECT	10uF	20%	50V
C707	1-163-031-11	CERAMIC CHIP	0.01uF		50V
C708	1-162-282-31	CERAMIC	100PF	10%	50V
C709	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C738	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C739	1-164-159-11	CERAMIC	0.1uF		50V
C751	1-163-001-11	CERAMIC CHIP	220PF	10%	50V
C752	1-126-964-11	ELECT	10uF	20%	50V
C753	1-164-182-11	CERAMIC CHIP	0.0033uF	10%	50V
C756	1-126-964-11	ELECT	10uF	20%	50V
C908	1-164-159-11	CERAMIC	0.1uF		50V (AEP,UK,G,IT,EE)
C909	1-164-159-11	CERAMIC	0.1uF		50V (AEP,UK,G,IT,EE)
C958	1-164-159-11	CERAMIC	0.1uF		50V (AEP,UK,G,IT,EE)
C959	1-164-159-11	CERAMIC	0.1uF		50V (AEP,UK,G,IT,EE)
C971	1-126-923-11	ELECT	220uF	20%	10V
C972	1-126-923-11	ELECT	220uF	20%	10V
C973	1-164-159-11	CERAMIC	0.1uF		50V
C974	1-126-933-11	ELECT	100uF	20%	10V
C975	1-126-964-11	ELECT	10uF	20%	50V
C1001	1-163-003-11	CERAMIC CHIP	330PF	10%	50V
C1008	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V
C1051	1-162-288-31	CERAMIC	330PF	10%	50V
C1058	1-162-294-31	CERAMIC	0.001uF	10%	50V
C1109	1-126-956-91	ELECT	0.1uF	20%	50V
C2001	1-162-306-11	CERAMIC	0.01uF	30%	16V
		< CONNECTOR >			
CN101	1-770-167-11	CONNECTOR, FFC/FPC 19P			
CN103	1-774-289-11	PIN, CONNECTOR (PC BOARD) 15P			

Ref. No.	Part No.	Description	Remark
* CN104	1-569-934-11	SOCKET, CONNECTOR 17P	
CN105	1-764-286-11	PIN, CONNECTOR (PC BOARD) 16P	
CN401	1-569-937-11	SOCKET, CONNECTOR 21P	
CN402	1-569-928-11	SOCKET, CONNECTOR 11P	
		< DIODE >	
D102	8-719-987-63	DIODE 1N4148M	
D103	8-719-987-63	DIODE 1N4148M	
D104	8-719-010-29	DIODE UZ-4.3BSB	
D106	8-719-200-82	DIODE 11ES2 (AEP,UK,G,IT,E3,HK)	
D106	8-719-024-99	DIODE 11ES2-NTA2B (E2,EA,EE,AR,AU,MX,MY, SP,TW)	
D107	8-719-987-63	DIODE 1N4148M	
D108	8-719-987-63	DIODE 1N4148M	
D109	8-719-200-82	DIODE 11ES2 (AEP,UK,G,IT,E3,HK)	
D109	8-719-024-99	DIODE 11ES2-NTA2B (E2,EA,EE,AR,AUS,MX, MY,SP,TW)	
D110	8-719-987-63	DIODE 1N4148M	
D111	8-719-987-63	DIODE 1N4148M	
D120	8-719-987-63	DIODE 1N4148M	
D121	8-719-987-63	DIODE 1N4148M	
D402	8-719-987-63	DIODE 1N4148M	
D403	8-719-987-63	DIODE 1N4148M	
D404	8-719-987-63	DIODE 1N4148M	
D703	8-719-200-82	DIODE 11ES2 (AEP,UK,G,IT,E3,HK)	
D703	8-719-024-99	DIODE 11ES2-NTA2B (E2,EA,EE,AR,AUS,MX, MY,SP,TW)	
D704	8-719-200-82	DIODE 11ES2 (AEP,UK,G,IT,E3,HK)	
D704	8-719-024-99	DIODE 11ES2-NTA2B (E2,EA,EE,AR,AUS,MX, MY,SP,TW)	
D971	8-719-987-63	DIODE 1N4148M	
D972	8-719-987-63	DIODE 1N4148M	
D1002	8-719-987-63	DIODE 1N4148M	
D1003	8-719-987-63	DIODE 1N4148M	
D1004	8-719-987-63	DIODE 1N4148M	
		< IC >	
IC101	8-759-357-82	IC TMP87CP64YF-6335	
IC102	8-759-925-74	IC SN74HC04ANS	
IC103	8-759-165-82	IC PST600E-T	
IC104	8-759-291-98	IC M62423FP	
IC105	8-759-281-42	IC TC9210P	
IC106	8-759-822-09	IC LB1641	
IC401	8-759-289-38	IC HA12195NT	
IC402	8-759-822-09	IC LB1641	
IC701	8-759-009-06	IC MC14052BF	
IC971	8-759-111-68	IC UPC1237HA	
		< JACK >	
J102	1-750-032-11	JACK (DIA. 3.5) (PHONES)	
J701	1-573-028-31	JACK, PIN 4P (MD IN/OUT)	

MAIN

Ref. No.	Part No.	Description				Remark
		< JUMPER RESISTOR >				
JR101	1-216-295-00	METAL CHIP	0	5%	1/10W	
JR102	1-216-296-00	METAL CHIP	0	5%	1/8W	
JR103	1-216-296-00	METAL CHIP	0	5%	1/8W	
JR104	1-216-296-00	METAL CHIP	0	5%	1/8W	
JR105	1-216-295-00	METAL CHIP	0	5%	1/10W	
JR106	1-216-295-00	METAL CHIP	0	5%	1/10W	
JR107	1-216-296-00	METAL CHIP	0	5%	1/8W	
JR108	1-216-296-00	METAL CHIP	0	5%	1/8W	
JR111	1-216-296-00	METAL CHIP	0	5%	1/8W	
JR112	1-216-296-00	METAL CHIP	0	5%	1/8W	
JR113	1-216-296-00	METAL CHIP	0	5%	1/8W	
JR114	1-216-296-00	METAL CHIP	0	5%	1/8W	
JR115	1-216-295-00	METAL CHIP	0	5%	1/10W	
JR116	1-216-295-00	METAL CHIP	0	5%	1/10W	
JR117	1-216-295-00	METAL CHIP	0	5%	1/10W	
JR118	1-216-295-00	METAL CHIP	0	5%	1/10W	
JR119	1-216-296-00	METAL CHIP	0	5%	1/8W	
JR120	1-216-295-00	METAL CHIP	0	5%	1/10W	
JR121	1-216-296-00	METAL CHIP	0	5%	1/8W	
JR122	1-216-296-00	METAL CHIP	0	5%	1/8W	
JR127	1-216-296-00	METAL CHIP	0	5%	1/8W	
JR129	1-216-295-00	METAL CHIP	0	5%	1/10W	
JR130	1-216-295-00	METAL CHIP	0	5%	1/10W	
JR310	1-216-295-00	METAL CHIP	0	5%	1/10W	
JR1010	1-216-295-00	METAL CHIP	0	5%	1/10W	
		< COIL >				
L101	1-410-509-11	INDUCTOR	10uH			
L401	1-410-482-31	INDUCTOR	100uH			
L701	1-410-521-11	INDUCTOR	100uH			
L901	1-420-872-00	COIL, AIR-CORE (AEP,UK,G,IT,EE)				
L951	1-420-872-00	COIL, AIR-CORE (AEP,UK,G,IT,EE)				
		< TRANSISTOR >				
Q101	8-729-620-05	TRANSISTOR	2SC2603-EF			
Q102	8-729-422-57	TRANSISTOR	UN4111	(H11)		
Q102	8-729-900-61	TRANSISTOR	DTA114ES	(H11J)		
Q103	8-729-141-26	TRANSISTOR	2SC3622A-LK			
Q104	8-729-141-26	TRANSISTOR	2SC3622A-LK			
Q105	8-729-118-01	TRANSISTOR	2SB1116			
Q106	8-729-900-80	TRANSISTOR	DTC114ES			
Q401	8-729-620-05	TRANSISTOR	2SC2603-EF			
Q403	8-729-900-65	TRANSISTOR	DTA144ES			
Q404	8-729-620-05	TRANSISTOR	2SC2603-EF			
Q405	8-729-801-93	TRANSISTOR	2SD1387			
Q408	8-729-422-57	TRANSISTOR	UN4111 (H11)			
Q408	8-729-900-61	TRANSISTOR	DTA114ES (H11J)			
Q409	8-729-900-80	TRANSISTOR	DTC114ES			
Q410	8-729-119-76	TRANSISTOR	2SA1175-HFE			
Q411	8-729-900-80	TRANSISTOR	DTC114ES			
Q412	8-729-900-65	TRANSISTOR	DTA144ES			
Q413	8-729-900-65	TRANSISTOR	DTA144ES			
Q414	8-729-900-65	TRANSISTOR	DTA144ES			
Q451	8-729-620-05	TRANSISTOR	2SC2603-EF			
Q701	8-729-900-80	TRANSISTOR	DTC114ES			
Q702	8-729-900-80	TRANSISTOR	DTC114ES			
Q703	8-729-620-05	TRANSISTOR	2SC2603-EF			
Q704	8-729-620-05	TRANSISTOR	2SC2603-EF			
Q705	8-729-422-57	TRANSISTOR	UN4111 (H11)			
Q705	8-729-900-61	TRANSISTOR	DTA114ES (H11J)			
Q971	8-729-900-63	TRANSISTOR	DTA124ES			
Q972	8-729-900-89	TRANSISTOR	DTC144ES			
Q1001	8-729-202-67	TRANSISTOR	2SK246-GR3			
Q1051	8-729-202-67	TRANSISTOR	2SK246-GR3			
		< RESISTOR >				
R101	1-216-085-00	METAL CHIP	33K	5%	1/10W	
R103	1-249-417-11	CARBON	1K	5%	1/4W	
R104	1-216-097-00	METAL CHIP	100K	5%	1/10W	
R107	1-249-411-11	CARBON	330	5%	1/4W	
R108	1-249-413-11	CARBON	470	5%	1/4W	
R121	1-249-417-11	CARBON	1K	5%	1/4W	
R122	1-249-417-11	CARBON	1K	5%	1/4W	
R123	1-249-417-11	CARBON	1K	5%	1/4W	
R124	1-247-807-31	CARBON	100	5%	1/4W	
R125	1-249-417-11	CARBON	1K	5%	1/4W	
R126	1-216-025-00	METAL CHIP	100	5%	1/10W	
R127	1-216-025-00	METAL CHIP	100	5%	1/10W	
R128	1-216-025-00	METAL CHIP	100	5%	1/10W	
R129	1-216-073-00	METAL CHIP	10K	5%	1/10W	
R131	1-216-065-00	METAL CHIP	4.7K	5%	1/10W	
R132	1-216-065-00	METAL CHIP	4.7K	5%	1/10W	
R133	1-249-413-11	CARBON	470	5%	1/4W	
R134	1-249-413-11	CARBON	470	5%	1/4W	
R137	1-249-421-11	CARBON	2.2K	5%	1/4W	
R138	1-249-409-11	CARBON	220	5%	1/4W	
R139	1-216-073-00	METAL CHIP	10K	5%	1/10W	
R140	1-216-073-00	METAL CHIP	10K	5%	1/10W	
R141	1-216-073-00	METAL CHIP	10K	5%	1/10W	
R142	1-216-073-00	METAL CHIP	10K	5%	1/10W	
R143	1-216-073-00	METAL CHIP	10K	5%	1/10W	
R144	1-216-089-91	METAL CHIP	47K	5%	1/10W	
R145	1-216-089-91	METAL CHIP	47K	5%	1/10W	
R146	1-216-081-00	METAL CHIP	22K	5%	1/10W	
R147	1-216-073-00	METAL CHIP	10K	5%	1/10W	
R148	1-216-073-00	METAL CHIP	10K	5%	1/10W	
R149	1-216-073-00	METAL CHIP	10K	5%	1/10W	
R150	1-216-073-00	METAL CHIP	10K	5%	1/10W	
R151	1-216-085-00	METAL CHIP	33K	5%	1/10W	
R153	1-249-417-11	CARBON	1K	5%	1/4W	
R154	1-216-097-00	METAL CHIP	100K	5%	1/10W	
R157	1-249-411-11	CARBON	330	5%	1/4W	
R158	1-249-413-11	CARBON	470	5%	1/4W	

Ref. No.	Part No.	Description			Remark
R159	1-216-073-00	METAL CHIP	10K	5%	1/10W
R171	1-216-073-00	METAL CHIP	10K	5%	1/10W (AEP,UK,G,IT,EA,TW)
R171	1-216-081-00	METAL CHIP	22K	5%	1/10W (E2,AR,MX)
R171	1-216-077-00	METAL CHIP	15K	5%	1/10W (E3,AUS,HK,MY,SP)
R171	1-216-061-00	METAL CHIP	3.3K	5%	1/10W (EE)
R172	1-249-433-11	CARBON	22K	5%	1/4W (AEP,UK)
R172	1-249-429-11	CARBON	10K	5%	1/4W (G,E2,AR,AUS,MX)
R172	1-249-431-11	CARBON	15K	5%	1/4W (IT,EE)
R172	1-249-423-11	CARBON	3.3K	5%	1/4W (E3,EA,HK,MY,SP,TW)
R173	1-216-073-00	METAL CHIP	10K	5%	1/10W
R174	1-247-807-31	CARBON	100	5%	1/4W
R175	1-247-807-31	CARBON	100	5%	1/4W
R176	1-247-807-31	CARBON	100	5%	1/4W
R178	1-247-807-31	CARBON	100	5%	1/4W
R179	1-247-807-31	CARBON	100	5%	1/4W
R180	1-216-025-00	METAL CHIP	100	5%	1/10W
R181	1-216-097-00	METAL CHIP	100K	5%	1/10W
R182	1-249-441-11	CARBON	100K	5%	1/4W
R183	1-249-425-11	CARBON	4.7K	5%	1/4W
R185	1-249-425-11	CARBON	4.7K	5%	1/4W
R210	1-216-089-91	METAL CHIP	47K	5%	1/10W
R212	1-247-807-31	CARBON	100	5%	1/4W
R215	1-216-025-00	METAL CHIP	100	5%	1/10W
R216	1-216-049-11	METAL CHIP	1K	5%	1/10W
R217	1-216-049-11	METAL CHIP	1K	5%	1/10W
R218	1-247-807-31	CARBON	100	5%	1/4W
R219	1-216-049-11	METAL CHIP	1K	5%	1/10W
R220	1-247-807-31	CARBON	100	5%	1/4W
R401	1-216-075-00	METAL CHIP	12K	5%	1/10W
R402	1-216-077-00	METAL CHIP	15K	5%	1/10W
R403	1-216-069-00	METAL CHIP	6.8K	5%	1/10W
R404	1-249-421-11	CARBON	2.2K	5%	1/4W
R405	1-216-053-00	METAL CHIP	1.5K	5%	1/10W
R406	1-216-049-11	METAL CHIP	1K	5%	1/10W
R407	1-216-073-00	METAL CHIP	10K	5%	1/10W
R408	1-216-049-11	METAL CHIP	1K	5%	1/10W
R409	1-216-081-00	METAL CHIP	22K	5%	1/10W
R420	1-215-451-00	METAL	18K	1%	1/4W
R421	1-249-429-11	CARBON	10K	5%	1/4W
R422	1-249-429-11	CARBON	10K	5%	1/4W
R423	1-249-429-11	CARBON	10K	5%	1/4W
R424	1-249-429-11	CARBON	10K	5%	1/4W
R425	1-249-429-11	CARBON	10K	5%	1/4W
R426	1-249-429-11	CARBON	10K	5%	1/4W
R427	1-249-429-11	CARBON	10K	5%	1/4W

Ref. No.	Part No.	Description			Remark
R428	1-249-429-11	CARBON	10K	5%	1/4W
R429	1-249-429-11	CARBON	10K	5%	1/4W
R430	1-216-084-00	METAL CHIP	30K	5%	1/10W
R431	1-216-100-00	METAL CHIP	130K	5%	1/10W
R432	1-249-429-11	CARBON	10K	5%	1/4W
R433	1-216-065-00	METAL CHIP	4.7K	5%	1/10W
R434	1-216-065-00	METAL CHIP	4.7K	5%	1/10W
R435	1-216-065-00	METAL CHIP	4.7K	5%	1/10W
R436	1-216-049-11	METAL CHIP	1K	5%	1/10W
R437	1-249-436-11	CARBON	39K	5%	1/4W
R438	1-216-689-11	METAL CHIP	39K	0.5%	1/10W
R439	1-249-437-11	CARBON	47K	5%	1/4W
R440	1-216-089-91	METAL CHIP	47K	5%	1/10W
R442	1-216-041-00	METAL CHIP	470	5%	1/10W
R447	1-249-419-11	CARBON	1.5K	5%	1/4W
R448	1-249-433-11	CARBON	22K	5%	1/4W
R449	1-249-435-11	CARBON	33K	5%	1/4W
R450	1-249-433-11	CARBON	22K	5%	1/4W
R451	1-216-075-00	METAL CHIP	12K	5%	1/10W
R452	1-216-077-00	METAL CHIP	15K	5%	1/10W
R453	1-216-069-00	METAL CHIP	6.8K	5%	1/10W
R454	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R455	1-216-053-00	METAL CHIP	1.5K	5%	1/10W
R456	1-249-417-11	CARBON	1K	5%	1/4W
R457	1-216-073-00	METAL CHIP	10K	5%	1/10W
R458	1-249-417-11	CARBON	1K	5%	1/4W
R459	1-249-433-11	CARBON	22K	5%	1/4W
R460	1-216-065-00	METAL CHIP	4.7K	5%	1/10W
R461	1-216-025-00	METAL CHIP	100	5%	1/10W
R462	1-216-025-00	METAL CHIP	100	5%	1/10W
R463	1-216-025-00	METAL CHIP	100	5%	1/10W
R464	1-247-807-31	CARBON	100	5%	1/4W
R465	1-216-025-00	METAL CHIP	100	5%	1/10W
R466	1-216-025-00	METAL CHIP	100	5%	1/10W
R467	1-247-807-31	CARBON	100	5%	1/4W
R470	1-249-433-11	CARBON	22K	5%	1/4W
R480	1-216-082-00	METAL CHIP	24K	5%	1/10W
R702	1-249-421-11	CARBON	2.2K	5%	1/4W
R704	1-216-049-11	METAL CHIP	1K	5%	1/10W
R705	1-216-101-00	METAL CHIP	150K	5%	1/10W
R706	1-249-417-11	CARBON	1K	5%	1/4W
R707	1-249-417-11	CARBON	1K	5%	1/4W
R708	1-249-427-11	CARBON	6.8K	5%	1/4W
R709	1-249-429-11	CARBON	10K	5%	1/4W
R710	1-249-441-11	CARBON	100K	5%	1/4W
R731	1-249-429-11	CARBON	10K	5%	1/4W
R732	1-249-429-11	CARBON	10K	5%	1/4W
R733	1-216-073-00	METAL CHIP	10K	5%	1/10W
R734	1-249-425-11	CARBON	4.7K	5%	1/4W
R735	1-249-425-11	CARBON	4.7K	5%	1/4W
R738	1-216-095-00	METAL CHIP	82K	5%	1/10W
R739	1-249-439-11	CARBON	68K	5%	1/4W

MAIN PANEL

Ref. No.	Part No.	Description			Remark
R752	1-249-421-11	CARBON	2.2K	5%	1/4W
R754	1-249-417-11	CARBON	1K	5%	1/4W
R755	1-216-101-00	METAL CHIP	150K	5%	1/10W
R756	1-249-417-11	CARBON	1K	5%	1/4W
R757	1-249-417-11	CARBON	1K	5%	1/4W
R758	1-249-427-11	CARBON	6.8K	5%	1/4W
R759	1-249-429-11	CARBON	10K	5%	1/4W
R760	1-249-441-11	CARBON	100K	5%	1/4W
R912	1-249-389-11	CARBON	4.7	5%	1/4W (AEP,UK,G,IT,EE)
R913	1-249-389-11	CARBON	4.7	5%	1/4W (AEP,UK,G,IT,EE)
R914	1-249-393-11	CARBON	10	5%	1/4W (AEP,UK,G,IT,EE)
R962	1-249-389-11	CARBON	4.7	5%	1/4W (AEP,UK,G,IT,EE)
R963	1-249-389-11	CARBON	4.7	5%	1/4W (AEP,UK,G,IT,EE)
R964	1-249-393-11	CARBON	10	5%	1/4W (AEP,UK,G,IT,EE)
R971	1-249-439-11	CARBON	68K	5%	1/4W
R972	1-249-437-11	CARBON	47K	5%	1/4W
R973	1-216-073-00	METAL CHIP	10K	5%	1/10W
R974	1-249-441-11	CARBON	100K	5%	1/4W
R975	1-216-085-00	METAL CHIP	33K	5%	1/10W
R976	1-249-397-11	CARBON	22	5%	1/4W
R977	1-249-425-11	CARBON	4.7K	5%	1/4W
R978	1-249-423-11	CARBON	3.3K	5%	1/4W
R979	1-215-889-00	METAL OXIDE	330	5%	2W
R1008	1-216-073-00	METAL CHIP	10K	5%	1/10W
R1009	1-216-097-00	METAL CHIP	100K	5%	1/10W
R1011	1-216-073-00	METAL CHIP	10K	5%	1/10W
R1058	1-216-073-00	METAL CHIP	10K	5%	1/10W
R1059	1-249-441-11	CARBON	100K	5%	1/4W
R1061	1-249-429-11	CARBON	10K	5%	1/4W
R1101	1-249-433-11	CARBON	22K	5%	1/4W
R1102	1-249-433-11	CARBON	22K	5%	1/4W
R1104	1-249-437-11	CARBON	47K	5%	1/4W
R1105	1-249-440-11	CARBON	82K	5%	1/4W
R1107	1-247-903-00	CARBON	1M	5%	1/4W
		< VARIABLE RESISTOR >			
RV401	1-241-785-11	RES, ADJ, CARBON 10K (REC LEVEL L)			
RV451	1-241-785-11	RES, ADJ, CARBON 10K (REC LEVEL R)			
		< RELAY >			
RY901	1-515-921-11	RELAY (12V)			
		< TERMINAL >			
TB901	1-537-240-11	TERMINAL BOARD (SPEAKER)			

Ref. No.	Part No.	Description			Remark
		< VIBRATOR >			
X101	1-579-175-11	VIBRATOR, CERAMIC (10MHz)			
X102	1-567-098-41	VIBRATOR, CRYSTAL (32kHz)			
**********					
*	A-4389-325-A	PANEL BOARD, COMPLETE (H11 : AEP,UK,G,IT, E3,EA,EE,HK,TW)			
*	A-4389-398-A	PANEL BOARD, COMPLETE (H11 : E2,AR,AUS)			
*	A-4389-401-A	PANEL BOARD, COMPLETE (H11 : MX)			
*	A-4389-408-A	PANEL BOARD, COMPLETE (H11 : MY,SP)			
*	A-4389-473-A	PANEL BOARD, COMPLETE (H11J)			
		**********			
*	4-977-399-01	HOUSE, LAMP (H11J)			
*	4-977-399-11	HOUSE, LAMP			
*	4-977-400-01	HOLDER (FL) (H11J)			
*	4-977-400-11	HOLDER (FL)			
		< CAPACITOR >			
C501	1-124-584-00	ELECT	100uF	20%	10V
C502	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C503	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C504	1-136-165-00	FILM	0.1uF	5%	50V
C505	1-136-165-00	FILM	0.1uF	5%	50V
C506	1-126-948-11	ELECT	100uF	20%	35V
C507	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C508	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C509	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C510	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C511	1-126-157-11	ELECT	10uF	20%	16V
C512	1-163-001-11	CERAMIC CHIP	220PF	10%	50V (E3,EA,HK,MY,SP,TW)
C513	1-163-001-11	CERAMIC CHIP	220PF	10%	50V (E3,EA,HK,MY,SP,TW)
C514	1-163-001-11	CERAMIC CHIP	220PF	10%	50V (E3,EA,HK,MY,SP,TW)
C515	1-163-001-11	CERAMIC CHIP	220PF	10%	50V (E3,EA,HK,MY,SP,TW)
C516	1-163-001-11	CERAMIC CHIP	220PF	10%	50V (E3,EA,HK,MY,SP,TW)
C517	1-163-001-11	CERAMIC CHIP	220PF	10%	50V (E3,EA,HK,MY,SP,TW)
C518	1-163-001-11	CERAMIC CHIP	220PF	10%	50V (E3,EA,HK,MY,SP,TW)
C519	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C520	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C521	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C522	1-163-038-91	CERAMIC CHIP	0.1uF		25V
		< CONNECTOR >			
CN501	1-764-298-11	HOUSING,CONNECTOR(PC BOARD)16P			
		< DIODE >			
D501	8-719-987-63	DIODE 1N4148M			

Ref. No.	Part No.	Description				Remark
D502	8-719-200-82	DIODE	11ES2			
D503	8-719-014-73	DIODE	UZP-5.6BC-TP			
D504	8-719-032-98	LED	SEL5820A (B)			
D505	8-719-032-98	LED	SEL5820A (A)			
D506	8-719-311-61	LED	SEL2810D-D (DECK SELECT)			
D507	8-719-311-61	LED	SEL2810D-D (DECK SELECT)			
D508	8-719-032-98	LED	SEL5820A (◀)			
D509	8-719-032-98	LED	SEL5820A (▶▶)			
D510	8-719-032-98	LED	SEL5820A (◀◀)			
D511	8-719-032-98	LED	SEL5820A (■)			
D512	8-719-032-98	LED	SEL5820A (▶)			
D513	8-719-046-43	LED	SEL5421E-TP15 (TAPE)			
D514	8-719-046-43	LED	SEL5421E-TP15 (TUNER/BAND)			
D515	8-719-046-43	LED	SEL5421E-TP15 (CD)			
D516	8-719-812-44	LED	TLO124 (ENTER/NEXT)			
D517	8-719-032-98	LED	SEL5820A (❚❚)			
D518	8-719-311-61	LED	SEL2810D-D (TUNING MEMO)			
D519	8-719-311-61	LED	SEL2810D-D (TUNING MEMO)			
D520	8-719-311-61	LED	SEL2810D-D (STEREO/MONO)			
D521	8-719-311-61	LED	SEL2810D-D (STEREO/MONO)			
D522	8-719-311-61	LED	SEL2810D-D (TUNING MODE)			
D523	8-719-311-61	LED	SEL2810D-D (TUNING MODE)			
		< INDICATOR TUBE >				
FL501	1-517-473-11	INDICATOR TUBE, FLUORESCENT				
		< IC >				
IC501	8-752-868-14	IC	CXP82612-016Q			
IC502	8-741-780-51	IC	SBX1780-51			
		< TRANSISTOR >				
Q501	8-729-421-22	TRANSISTOR	UN2211			
Q502	8-729-424-08	TRANSISTOR	UN2111			
Q503	8-729-424-08	TRANSISTOR	UN2111			
Q507	8-729-424-08	TRANSISTOR	UN2111			
Q509	8-729-424-08	TRANSISTOR	UN2111			
		< RESISTOR >				
R501	1-216-073-00	METAL CHIP	10K	5%	1/10W	
R502	1-216-073-00	METAL CHIP	10K	5%	1/10W	
R503	1-216-073-00	METAL CHIP	10K	5%	1/10W	
R504	1-216-073-00	METAL CHIP	10K	5%	1/10W	
R505	1-216-073-00	METAL CHIP	10K	5%	1/10W	
R506	1-216-073-00	METAL CHIP	10K	5%	1/10W	
R507	1-216-073-00	METAL CHIP	10K	5%	1/10W	
R508	1-216-073-00	METAL CHIP	10K	5%	1/10W	
R509	1-216-049-11	METAL CHIP	1K	5%	1/10W	
R510	1-216-053-00	METAL CHIP	1.5K	5%	1/10W	
R511	1-249-407-11	CARBON	150	5%	1/4W	
R512	1-216-035-00	METAL CHIP	270	5%	1/10W	
R513	1-216-031-00	METAL CHIP	180	5%	1/10W	
R514	1-216-033-00	METAL CHIP	220	5%	1/10W	

Ref. No.	Part No.	Description				Remark
R515	1-216-037-00	METAL CHIP	330	5%	1/10W	
R516	1-216-041-00	METAL CHIP	470	5%	1/10W	
R517	1-216-043-91	METAL CHIP	560	5%	1/10W	
R518	1-216-047-91	METAL CHIP	820	5%	1/10W	
R519	1-216-051-00	METAL CHIP	1.2K	5%	1/10W	
R520	1-249-420-11	CARBON	1.8K	5%	1/4W	
R521	1-216-053-00	METAL CHIP	1.5K	5%	1/10W	
R522	1-216-029-00	METAL CHIP	150	5%	1/10W	
R523	1-216-035-00	METAL CHIP	270	5%	1/10W	
R524	1-216-031-00	METAL CHIP	180	5%	1/10W	
R525	1-216-033-00	METAL CHIP	220	5%	1/10W	
R526	1-216-037-00	METAL CHIP	330	5%	1/10W	
R527	1-216-041-00	METAL CHIP	470	5%	1/10W	
R528	1-216-043-91	METAL CHIP	560	5%	1/10W	
R529	1-216-047-91	METAL CHIP	820	5%	1/10W	
R530	1-216-051-00	METAL CHIP	1.2K	5%	1/10W	
R531	1-216-055-00	METAL CHIP	1.8K	5%	1/10W	
R532	1-216-061-00	METAL CHIP	3.3K	5%	1/10W	
R533	1-216-053-00	METAL CHIP	1.5K	5%	1/10W	
R534	1-216-029-00	METAL CHIP	150	5%	1/10W	
R535	1-216-035-00	METAL CHIP	270	5%	1/10W	
R536	1-216-031-00	METAL CHIP	180	5%	1/10W	
R537	1-216-033-00	METAL CHIP	220	5%	1/10W	
R538	1-216-029-00	METAL CHIP	150	5%	1/10W	
R539	1-216-029-00	METAL CHIP	150	5%	1/10W	
R540	1-216-017-91	METAL CHIP	47	5%	1/10W	
R542	1-216-029-00	METAL CHIP	150	5%	1/10W	
R543	1-216-017-91	METAL CHIP	47	5%	1/10W	
R545	1-216-017-91	METAL CHIP	47	5%	1/10W	
R547	1-216-029-00	METAL CHIP	150	5%	1/10W	
R548	1-216-029-00	METAL CHIP	150	5%	1/10W	
R549	1-216-029-00	METAL CHIP	150	5%	1/10W	
R550	1-216-033-00	METAL CHIP	220	5%	1/10W	
R551	1-216-029-00	METAL CHIP	150	5%	1/10W	
R552	1-216-017-91	METAL CHIP	47	5%	1/10W	
R554	1-216-017-91	METAL CHIP	47	5%	1/10W	
R556	1-216-017-91	METAL CHIP	47	5%	1/10W	
R570	1-247-807-31	CARBON	100	5%	1/4W	
R571	1-247-807-31	CARBON	100	5%	1/4W	
R572	1-247-807-31	CARBON	100	5%	1/4W	
R573	1-247-807-31	CARBON	100	5%	1/4W	
R574	1-247-807-31	CARBON	100	5%	1/4W	
R575	1-247-807-31	CARBON	100	5%	1/4W	
R576	1-249-421-11	CARBON	2.2K	5%	1/4W	
R577	1-249-409-11	CARBON	220	5%	1/4W	
R578	1-249-409-11	CARBON	220	5%	1/4W	
R579	1-216-097-00	METAL CHIP	100K	5%	1/10W	
		< SWITCH >				
S501	1-554-303-21	SWITCH, TACTILE (TAPE)				
S502	1-554-303-21	SWITCH, TACTILE (TUNER/BAND)				

PANEL | POWER AMP

Ref. No.	Part No.	Description	Remark
S503	1-554-303-21	SWITCH, TACTILE (CD)	
S504	1-554-303-21	SWITCH, TACTILE (ENTER/BAND)	
S505	1-554-303-21	SWITCH, TACTILE (⏏OPEN/CLOSE CD)	
S506	1-554-303-21	SWITCH, TACTILE (REPEAT)	
S507	1-554-303-21	SWITCH, TACTILE (HI-SPEED DUBBING)	
S508	1-554-303-21	SWITCH, TACTILE (DIRECTION MODE)	
S509	1-554-303-21	SWITCH, TACTILE (DOLBY NR)	
S510	1-554-303-21	SWITCH, TACTILE (CD SYNCRO)	
S511	1-554-303-21	SWITCH, TACTILE (PLAY MODE)	
S512	1-554-303-21	SWITCH, TACTILE (SYSTEM POWER)	
S513	1-554-303-21	SWITCH, TACTILE (FUNCTION)	
S514	1-554-303-21	SWITCH, TACTILE (VOLUME –)	
S515	1-554-303-21	SWITCH, TACTILE (VOLUME +)	
S516	1-554-303-21	SWITCH, TACTILE (DECK SELECT A B)	
S517	1-554-303-21	SWITCH, TACTILE (REC ●)	
S518	1-554-303-21	SWITCH, TACTILE (❚❚)	
S519	1-554-303-21	SWITCH, TACTILE (TUNING MEMO■)	
S520	1-554-303-21	SWITCH, TACTILE (►►)	
S521	1-554-303-21	SWITCH, TACTILE (STEREO/MONO►)	
S522	1-554-303-21	SWITCH, TACTILE (◄◄)	
S523	1-554-303-21	SWITCH, TACTILE (TUNING MODE◄)	
S524	1-554-303-21	SWITCH, TACTILE (DISPLAY)	
S525	1-554-303-21	SWITCH, TACTILE (SLEEP)	
S526	1-572-184-11	SWITCH, KEYBOARD (TIMER SET)	
S527	1-572-184-11	SWITCH, KEYBOARD (CLOCK SET)	
S528	1-554-303-21	SWITCH, TACTILE (TIMER SELECT)	
S530	1-473-480-11	ENCODER, ROTARY (MULTIJOG STATION)	
		< VIBRATOR >	
X501	1-567-819-11	VIBRATOR, CERAMIC (4MHz)	

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*	A-4389-314-A	POWER AMP BOARD, COMPLETE (H11 : AEP, UK,G,IT,E,EA,EE,AR,AUS,HK,TW)				
*	A-4389-402-A	POWER AMP BOARD, COMPLETE (H11 : MX)				
*	A-4389-409-A	POWER AMP BOARD, COMPLETE (H11 : MY,SP)				
*	A-4389-474-A	POWER AMP BOARD, COMPLETE (H11J)				
		**********				
*	3-923-762-11	HOLDER (TR)				
		< CAPACITOR >				
C901	1-124-925-11	ELECT	2.2uF	20%	100V	
C902	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V	
C903	1-163-001-11	CERAMIC CHIP	220PF	10%	50V	
C904	1-126-947-11	ELECT	47uF	20%	35V	
C905	1-126-947-11	ELECT	47uF	20%	35V	
C906	1-163-038-91	CERAMIC CHIP	0.1uF		25V	
C907	1-163-038-91	CERAMIC CHIP	0.1uF		25V	
C932	1-126-948-11	ELECT	100uF	20%	35V	
C933	1-163-038-91	CERAMIC CHIP	0.1uF		25V	
C934	1-126-948-11	ELECT	100uF	20%	35V	
C936	1-164-159-11	CERAMIC	0.1uF		50V	
C937	1-104-667-11	ELECT	22uF	20%	35V	
C950	1-136-161-00	FILM	0.047uF	5%	50V	
C951	1-124-925-11	ELECT	2.2uF	20%	100V	
C952	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V	
C953	1-163-001-11	CERAMIC CHIP	220PF	10%	50V	
C954	1-126-947-11	ELECT	47uF	20%	35V	
C955	1-126-947-11	ELECT	47uF	20%	35V	
C956	1-163-038-91	CERAMIC CHIP	0.1uF		25V	
C957	1-163-038-91	CERAMIC CHIP	0.1uF		25V	
		< DIODE >				
D902	8-719-016-74	DIODE 1SS352				
		< IC >				
IC801	8-759-231-58	IC TA7812S				
IC901	8-749-920-19	IC STK4122MK2				
		< TRANSISTOR >				
Q804	8-729-209-15	TRANSISTOR 2SD2012				
Q902	8-729-184-53	TRANSISTOR 2SC1845-EA				
		< RESISTOR >				
⚠ R816	1-212-861-11	FUSIBLE	15	5%	1/4W F	
R901	1-216-049-91	METAL GLAZE	1K	5%	1/10W	
R902	1-216-081-00	METAL CHIP	22K	5%	1/10W	
R903	1-216-041-00	METAL CHIP	470	5%	1/10W	
R904	1-249-433-11	CARBON	22K	5%	1/4W	
⚠ R905	1-202-972-61	FUSIBLE	1	5%	1/4W F	
R906	1-249-421-11	CARBON	2.2K	5%	1/4W	
R907	1-249-421-11	CARBON	2.2K	5%	1/4W	
R910	1-216-308-00	METAL CHIP	4.7	5%	1/10W	
⚠ R911	1-217-151-00	METAL PLATE	0.22	10%	2W F	
R915	1-249-417-11	CARBON	1K	5%	1/4W	
⚠ R931	1-212-881-11	FUSIBLE	100	5%	1/4W F	
⚠ R932	1-212-881-11	FUSIBLE	100	5%	1/4W F	
R933	1-249-417-11	CARBON	1K	5%	1/4W	
R935	1-249-417-11	CARBON	1K	5%	1/4W	
R937	1-249-429-11	CARBON	10K	5%	1/4W	
R951	1-249-417-11	CARBON	1K	5%	1/4W	
R952	1-216-081-00	METAL CHIP	22K	5%	1/10W	
R953	1-216-041-00	METAL CHIP	470	5%	1/10W	
R954	1-249-433-11	CARBON	22K	5%	1/4W	
⚠ R955	1-202-972-61	FUSIBLE	1	5%	1/4W F	
R956	1-249-421-11	CARBON	2.2K	5%	1/4W	
R957	1-249-421-11	CARBON	2.2K	5%	1/4W	
R960	1-216-308-00	METAL CHIP	4.7	5%	1/10W	
⚠ R961	1-217-151-00	METAL PLATE	0.22	10%	2W F	
R965	1-249-417-11	CARBON	1K	5%	1/4W	
R966	1-216-077-00	METAL CHIP	15K	5%	1/10W	
R967	1-216-097-91	METAL GLAZE	100K	5%	1/10W	

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The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

Ref. No.	Part No.	Description	Remark
*	A-4389-315-A	POWER BOARD, COMPLETE (H11 : AEP,UK,G,IT, E,EA,EE,AR,AUS,HK,TW)	
*	A-4389-403-A	POWER BOARD, COMPLETE (H11 : MX)	
*	A-4389-410-A	POWER BOARD, COMPLETE (H11 : MY,SP)	
*	A-4389-475-A	POWER BOARD, COMPLETE (H11J)	
		**********	
*	3-309-144-21	HEAT SINK (H11J)	
	7-682-548-04	SCREW +BVTT 3X8 (S)	
		< CAPACITOR >	
C801	1-136-177-00	FILM 1uF 5% 50V	
C802	1-136-177-00	FILM 1uF 5% 50V	
C803	1-126-953-11	ELECT 2200uF 20% 35V	
C804	1-126-953-11	ELECT 2200uF 20% 35V	
C805	1-126-969-11	ELECT 220uF 20% 50V	
C806	1-128-552-51	ELECT 47uF 20% 63V	
C807	1-126-948-11	ELECT 100uF 20% 35V	
C808	1-126-947-11	ELECT 47uF 20% 35V	
C811	1-126-935-11	ELECT 470uF 20% 16V	
C812	1-126-925-11	ELECT 470uF 20% 10V	
C813	1-126-967-11	ELECT 47uF 20% 10V	
C814	1-126-933-11	ELECT 100uF 20% 10V	
C815	1-126-967-11	ELECT 47uF 20% 10V	
C816	1-126-933-11	ELECT 100uF 20% 10V	
C817	1-126-967-11	ELECT 47uF 20% 10V	
C818	1-126-933-11	ELECT 100uF 20% 10V	
C819	1-126-967-11	ELECT 47uF 20% 10V	
C831	1-126-936-11	ELECT 3300uF 20% 16V	
C843	1-164-159-11	CERAMIC 0.1uF 50V	
C844	1-164-159-11	CERAMIC 0.1uF 50V	
C845	1-164-159-11	CERAMIC 0.1uF 50V	
C848	1-164-159-11	CERAMIC 0.1uF 50V	
C849	1-164-159-11	CERAMIC 0.1uF 50V	
C850	1-164-159-11	CERAMIC 0.1uF 50V	
C938	1-126-947-11	ELECT 47uF 20% 35V	
C939	1-126-964-11	ELECT 10uF 20% 50V	
		< CONNECTOR >	
CN801	1-691-765-11	PLUG (MICRO CONNECTOR) 3P	
CN803	1-564-524-11	PLUG, CONNECTOR 9P	
CN804	1-750-749-11	CONNECTOR, FFC/FPC 17P	
CN805	1-564-505-11	PLUG, CONNECTOR 2P	
		< DIODE >	
D801	8-719-302-38	DIODE RBV-602-01	
D802	8-719-200-82	DIODE 11ES2	
D802	8-719-024-99	DIODE 11ES2-NTA2B (MX,MY,SP)	
D803	8-719-200-82	DIODE 11ES2	
D803	8-719-024-99	DIODE 11ES2-NTA2B (MX,MY,SP)	
D804	8-719-011-08	DIODE UZ-27BSC	
D805	8-719-933-50	DIODE HZS7C2L	
D807	8-719-109-98	DIODE RD6.8ES-B3	
D808	8-719-933-54	DIODE HZS9A2L	
D809	8-719-987-63	DIODE 1N4148M	
D810	8-719-987-63	DIODE 1N4148M	
D811	8-719-200-82	DIODE 11ES2 (EXCEPT MX,MY,SP)	
D811	8-719-024-99	DIODE 11ES2-NTA2B (MX,MY,SP)	
D812	8-719-200-82	DIODE 11ES2 (EXCEPT MX,MY,SP)	
D812	8-719-024-99	DIODE 11ES2-NTA2B (MX,MY,SP)	
D901	8-719-016-74	DIODE 1SS352	
D903	8-719-016-74	DIODE 1SS352	
D904	8-719-016-74	DIODE 1SS352	
		< IC >	
IC802	8-759-604-86	IC M5F7807L	
		< TRANSISTOR >	
Q801	8-729-018-59	TRANSISTOR 2SB1375-LC	
Q802	8-729-018-60	TRANSISTOR 2SD2012-LC	
Q805	8-729-141-83	TRANSISTOR 2SB1094-LK	
Q806	8-729-620-05	TRANSISTOR 2SC2603-EF	
Q807	8-729-216-22	TRANSISTOR 2SA1162-G	
Q808	8-729-216-22	TRANSISTOR 2SA1162-G	
Q901	8-729-184-53	TRANSISTOR 2SC1845-EA	
Q903	8-729-421-19	TRANSISTOR UN2213	
Q904	8-729-421-19	TRANSISTOR UN2213	
		< RESISTOR >	
R803	1-249-417-11	CARBON 1K 5% 1/4W	
R804	1-249-417-11	CARBON 1K 5% 1/4W	
R805	1-249-415-11	CARBON 680 5% 1/4W	
R807	1-249-415-11	CARBON 680 5% 1/4W	
⚠ R808	1-213-072-00	FUSIBLE 33 5% 1W F	
R809	1-249-419-11	CARBON 1.5K 5% 1/4W	
R810	1-249-421-11	CARBON 2.2K 5% 1/4W	
⚠ R811	1-217-642-91	FUSIBLE 6.8 5% 1/4W F	
⚠ R812	1-217-637-00	FUSIBLE 1 5% 1/4W F	
⚠ R813	1-212-938-00	FUSIBLE 1.5 5% 1/2W F	
⚠ R816	1-212-861-11	FUSIBLE 15 5% 1/4W F	
R916	1-249-431-11	CARBON 15K 5% 1/4W	
R917	1-249-441-11	CARBON 100K 5% 1/4W	
R938	1-249-441-11	CARBON 100K 5% 1/4W	
R940	1-249-437-11	CARBON 47K 5% 1/4W	
R941	1-249-435-11	CARBON 33K 5% 1/4W	
R942	1-249-423-11	CARBON 3.3K 5% 1/4W	
R943	1-249-435-11	CARBON 33K 5% 1/4W	
R944	1-249-429-11	CARBON 10K 5% 1/4W	
R945	1-249-417-11	CARBON 1K 5% 1/4W	

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The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

TCB

Ref. No.	Part No.	Description			Remark
*	A-4303-499-A	TCB BOARD, COMPLETE (H11J)			
*	A-4303-532-A	TCB BOARD, COMPLETE (H11 : AEP,UK)			
*	A-4303-533-A	TCB BOARD, COMPLETE (H11 : G,IT)			
*	A-4303-534-A	TCB BOARD, COMPLETE (H11 : E3,EA,MY,SP, TW,HK)			
*	A-4303-535-A	TCB BOARD, COMPLETE (H11 : E2,MX,AR,AUS)			
*	A-4303-536-A	TCB BOARD, COMPLETE (H11 : EE)			
		**********			
		<CAPACITOR>			
C1	1-163-141-00	CERAMIC CHIP	0.001uF	5%	50V
C2	1-126-967-11	ELECT	47uF	20%	16V
C3	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C5	1-163-031-11	CERAMIC CHIP	0,01uF		50V
C6	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C7	1-101-004-00	CERAMIC	0.01uF		50V (EXCEPT AEP,UK,G,IT)
C8	1-163-031-11	CERAMIC CHIP	0.01uF		50V
C9	1-163-031-11	CERAMIC CHIP	0.01uF		50V
C10	1-163-031-11	CERAMIC CHIP	0.01uF		50V
C11	1-163-038-91	CERAMIC CHIP	0.1uF		25V (E3,EA,MY,SP,HK,TW)
C11	1-216-295-11	METAL CHIP	0	5%	1/10W (G,IT,E2,MX,AR,AUS)
C14	1-163-038-91	CERAMIC CHIP	0.1uF		25V (E3,EA,MY,SP,HK,TW)
C15	1-136-162-00	CERAMIC	0.056uF		50V (E3,EA,MY,SP,HK,TW)
C16	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C17	1-163-031-11	CERAMIC CHIP	0.01uF		50V (E3,EA,MY,SP,HK,TW)
C18	1-163-088-00	CERAMIC CHIP	5PF		50V (E3,EA,MY,SP,HK,TW)
C19	1-163-249-11	CERAMIC CHIP	82PF	5%	50V (AEP,UK,EE)
C21	1-163-141-00	CERAMIC CHIP	0.001uF	5%	50V
C22	1-163-031-11	CERAMIC CHIP	0.01uF		50V
C23	1-163-235-11	CERAMIC CHIP	22PF	5%	50V
C24	1-163-239-11	CERAMIC CHIP	33PF	5%	50V
C26	1-126-967-11	ELECT	47uF	20%	16V
C28	1-126-967-11	ELECT	47uF	20%	16V
C29	1-162-306-11	CERAMIC	0.01uF	30%	16V
C30	1-124-925-11	ELECT	2.2uF	20%	100V
C31	1-163-031-11	CERAMIC CHIP	0.01uF		50V
C32	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C33	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C34	1-163-091-00	CERAMIC CHIP	8PF		50V (EXCEPT AEP,UK,EE)
C34	1-163-229-11	CERAMIC CHIP	12PF	5%	50V (AEP,UK,EE)
C35	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C36	1-163-141-00	CERAMIC CHIP	0.001uF	5%	50V
C37	1-163-141-00	CERAMIC CHIP	0.001uF	5%	50V
C38	1-162-211-31	CERAMIC	33PF	5%	50V (E3,EA,MY,SP,HK,TW)
C39	1-163-141-00	CERAMIC CHIP	0.001uF	5%	50V
C40	1-163-031-11	CERAMIC CHIP	0.01uF		50V
C41	1-163-031-11	CERAMIC CHIP	0.01uF		50V
C42	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C43	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C44	1-163-031-11	CERAMIC CHIP	0.01uF		50V
C45	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C46	1-163-077-00	CERAMIC CHIP	0.1uF	10%	25V
C47	1-126-967-11	ELECT	47uF	20%	16V
C48	1-163-031-11	CERAMIC CHIP	0.01uF		50V
C49	1-124-902-00	ELECT	0.47uF	20%	50V
C50	1-124-903-11	ELECT	1.0uF	20%	50V
C51	1-124-903-11	ELECT	1.0uF	20%	50V
C52	1-126-964-11	ELECT	10uF	20%	50V
C53	1-126-964-11	ELECT	10uF	20%	50V
C54	1-126-157-11	ELECT	10uF	20%	16V
C55	1-126-157-11	ELECT	10uF	20%	16V
C56	1-126-157-11	ELECT	10uF	20%	16V
C57	1-163-017-00	CERAMIC CHIP	0.0047uF	5%	50V
C58	1-163-017-00	CERAMIC CHIP	0.0047uF	5%	50V
C59	1-163-809-11	CERAMIC CHIP	0.047uF	10%	25V (AEP,UK,IT,G)
C59	1-163-989-11	CERAMIC CHIP	0.033uF	10%	25V (E2,MX,AR,AUS,EE)
C60	1-163-809-11	CERAMIC CHIP	0.047uF	10%	25V (AEP,UK,IT,G)
C60	1-163-989-11	CERAMIC CHIP	0.033uF		25V (EXCEPT AEP,UK,IT,G)
C61	1-126-301-11	ELECT	1uF	20%	50V
C62	1-163-141-00	CERAMIC CHIP	0.001uF	5%	50V
C63	1-163-017-00	CERAMIC CHIP	0.0047uF	5%	50V
C64	1-126-967-11	ELECT	47uF	20%	16V
C65	1-163-031-11	CERAMIC CHIP	0.01uF		50V
C66	1-126-162-11	ELECT	3.3uF	20%	50V
C67	1-126-933-11	ELECT	100uF	20%	10V
C68	1-162-306-11	CERAMIC	0.01uF	30%	16V
C71	1-162-306-11	CERAMIC	0.01uF	30%	16V
C72	1-126-967-11	ELECT	47uF	20%	16V
C120	1-163-105-00	CERAMIC CHIP	33PF	5%	50V (AEP,UK,IT,G)
		<FILTER>			
CF1	1-567-389-11	FILTER,CERAMIC (EXCEPT AEP,UK,G,IT)			
CF1	1-579-374-71	FILTER,CERAMIC (AEP,UK,G,IT)			
CF2	1-760-393-11	FILTER,CERAMIC (AEP,UK,G,IT)			
CF3	1-567-389-11	FILTER,CERAMIC (EXCEPT AEP,UK,G,IT)			
CF3	1-760-393-11	FILTER,CERAMIC (AEP,UK,G,IT)			
		<CONNECTOR>			
* CN1	1-568-834-11	SOCKET,CONNECTOR 15P			

Ref. No.	Part No.	Description	Remark
		<TRIMMER>	
CV1	1-141-227-00	TRIMMER (E3,EA,MY,SP,HK,TW)	
CV2	1-141-227-00	TRIMMER (E3,EA,MY,SP,HK,TW)	
		<DIODE>	
D1	8-719-976-30	DIODE KV1560N (E3,EA,MY,SP,HK,TW)	
D21	8-719-976-99	DIODE UDZ-TE-17-5.1B	
D41	8-719-016-74	DIODE 1SS352-TPH3	
		<FRONTEND>	
EE1	1-233-532-11	FRONTEND (E,MX,AR,AUS,EA,MY,SP,HK,TW)	
FE1	1-233-542-11	FRONTEND (4GAND) (AEP,UK,IT,G)	
FE1	1-693-335-11	FRONTEND (3GAND) (EE)	
FE2	1-233-514-11	ENCAPSULATED COMPONENT (AEP,UK,EE)	
FE2	1-239-260-11	ENCAPSULATED COMPONENT (G,IT,E2,MX,AR,AUS)	
FE2	1-239-262-11	ENCAPSULATED COMPONENT (E3,EA,MY,SP,HK,TW)	
		<IC>	
IC21	8-759-288-54	IC LC72130	
IC41	8-759-176-03	IC LA1835	
		<IFT>	
IFT41	1-409-636-11	TRANSFORMER,IF (CERAMICFILTER)	
		<JUMPERRESISTOR>	
JR1	1-216-295-11	METAL CHIP 0 5% 1/10W	(G,IT,E2,MX,AR,AUS)
JR2	1-216-295-11	METAL CHIP 0 5% 1/10W	(AEP,UK,EE)
JR3	1-216-295-11	METAL CHIP 0 5% 1/10W	(G,IT,E2,MX,AR,AUS)
JR6	1-216-295-11	METAL CHIP 0 5% 1/10W	(AEP,UK,IT,G)
JR7	1-216-295-11	METAL CHIP 0 5% 1/10W	(G,IT,E2,MX,AR,AUS)
JR8	1-216-295-11	METAL CHIP 0 5% 1/10W	(AEP,UK,EE)
JR9	1-216-295-11	METAL CHIP 0 5% 1/10W	(AEP,UK,EE)
JR45	1-216-295-11	METAL CHIP 0 5% 1/10W	
JR46	1-216-296-11	METAL CHIP 0 5% 1/8W	
JR47	1-216-295-11	METAL CHIP 0 5% 1/10W	
JR48	1-216-295-11	METAL CHIP 0 5% 1/10W	
JR49	1-216-296-11	METAL CHIP 0 5% 1/8W	
JR50	1-216-295-11	METAL CHIP 0 5% 1/10W	(E3,EA,MY,SP,HK,TW)
JR51	1-216-295-11	METAL CHIP 0 5% 1/10W	(AEP,UK,E3,EA,MY,SP,HK,TW,EE)
JR52	1-216-295-11	METAL CHIP 0 5% 1/10W	
JR53	1-216-296-11	METAL CHIP 0 5% 1/8W	(AEP,UK,E3,EA,MY,SP,HK,TW,EE)
JR54	1-216-295-11	METAL CHIP 0 5% 1/10W	
JW4	1-249-413-11	CARBON 470 5% 1/4W	(AEP,UK,IT,G)
JW5	1-249-413-11	CARBON 470 5% 1/4W	(AEP,UK,IT,G)
		<COIL>	
L1	1-410-521-11	MICROINDUCTOR 100uH	(E3,EA,MY,SP,HK,TW)
L2	1-414-142-11	MICROINDUCTOR 1uH	(AEP,UK,IT,G)
L3	1-410-521-11	MICROINDUCTOR 100uH	
L4	1-410-515-11	INDUCTOR 33uH	(AEP,UK,G,IT)
L41	1-407-500-00	MICROINDUCTOR 4.7mH	(AEP,UK,EE)
L41	1-410-119-11	MICROINDUCTOR(ELTYPE) 1mH	(EXCEPT AEP,UK,EE)
		<FILTER>	
LPF41	1-239-845-11	FILTER,LOWPASS	
LPF42	1-239-845-11	FILTER,LOWPASS	
		<TRANSISTOR>	
Q1	8-729-201-27	TRANSISTOR 2SC2715Y-TE85L	
Q2	8-729-201-27	TRANSISTOR 2SC2715Y-TE85L	
Q3	8-729-201-27	TRANSISTOR 2SC2715Y-TE85L	
Q4	8-729-201-27	TRANSISTOR 2SC2715Y-TE85L	
Q5	8-729-424-08	TRANSISTOR MUN2111T1	
Q8	8-729-033-67	FET 2SK211-Y-TE85L	(E3,EA,MY,SP,HK,TW)
Q9	8-729-216-22	TRANSISTOR 2SA812-M5M6	(AEP,UK,E3,EA,MY,SP,HK,TW,EE)
Q10	8-729-216-22	TRANSISTOR 2SA812-M5M6	(E3,EA,MY,SP,HK,TW)
Q11	8-729-421-22	TRANSISTOR MUN2211T1	(AEP,UK,EE)
Q12	8-729-421-22	TRANSISTOR MUN2211T1	(AEP,UK,E3,EA,MY,SP,HK,TW,EE)
Q13	8-729-421-22	TRANSISTOR MUN2211T1	(AEP,UK,E3,EA,MY,SP,HK,TW,EE)
Q14	8-729-421-22	TRANSISTOR MUN2211T1	(AEP,UK,E3,EA,MY,SP,HK,TW,EE)
		<RESISTOR>	
R1	1-249-401-11	CARBON 47 5% 1/4W	
R2	1-216-037-00	METAL CHIP 330 5% 1/10W	
R3	1-216-037-00	METAL CHIP 330 5% 1/10W	
R5	1-216-037-00	METAL CHIP 330 5% 1/10W	
R6	1-216-081-00	METAL CHIP 22K 5% 1/10W	
R7	1-216-037-00	METAL CHIP 330 5% 1/10W	
R8	1-216-037-00	METAL CHIP 330 5% 1/10W	
R9	1-216-081-00	METAL CHIP 22K 5% 1/10W	

TCB TRANSFORMER

Ref. No.	Part No.	Description			Remark
R10	1-216-037-00	METAL CHIP	330	5%	1/10W
R11	1-216-081-00	METAL CHIP	22K	5%	1/10W
R12	1-216-037-00	METAL CHIP	330	5%	1/10W
R13	1-216-037-00	METAL CHIP	330	5%	1/10W
R14	1-216-081-00	METAL CHIP	22K	5%	1/10W
R18	1-216-073-00	METAL CHIP	10K	5%	1/10W (AEP,UK,EE)
R18	1-216-065-00	METAL CHIP	4.7K	5%	1/10W (E3,EA,MY,SP,HK,TW)
R19	1-216-073-00	METAL CHIP	10K	5%	1/10W (AEP,UK,E3,EA,MY,SP,HK,TW,EE)
R20	1-216-121-91	METAL CHIP	1M	5%	1/10W (E3,EA,MY,SP,HK,TW)
R21	1-216-049-11	METAL CHIP	1.0K	5%	1/10W
R22	1-216-049-11	METAL CHIP	1.0K	5%	1/10W
R23	1-216-049-11	METAL CHIP	1.0K	5%	1/10W
R24	1-216-025-11	METAL CHIP	100	5%	1/10W
R25	1-249-417-11	CARBON	1K	5%	1/4W
R26	1-249-437-11	CARBON	47K	5%	1/4W
R27	1-249-429-11	CARBON	10K	5%	1/4W
R28	1-249-417-11	CARBON	1K	5%	1/4W
R29	1-216-061-00	METAL CHIP	3.3K	5%	1/10W
R30	1-216-186-00	METAL CHIP	330	5%	1/8W
R31	1-216-025-11	METAL CHIP	100	5%	1/10W
R32	1-249-425-11	CARBON	4.7K	5%	1/4W
R33	1-249-425-11	CARBON	4.7K	5%	1/4W
R34	1-216-065-00	METAL CHIP	4.7K	5%	1/10W
R35	1-216-214-00	METAL CHIP	4.7K	5%	1/8W
R36	1-216-025-11	METAL CHIP	100	5%	1/10W
R37	1-216-073-00	METAL CHIP	10K	5%	1/10W
R38	1-216-089-11	METAL CHIP	47K	5%	1/10W
R39	1-249-429-11	CARBON	10K	5%	1/4W
R42	1-216-073-00	METAL CHIP	10K	5%	1/10W
R43	1-216-042-00	METAL CHIP	510	5%	1/10W
R44	1-216-021-00	METAL CHIP	68	5%	1/10W
R45	1-249-423-11	CARBON	3.3K	5%	1/4W
R46	1-216-073-00	METAL CHIP	10K	5%	1/10W
R47	1-216-097-11	METAL CHIP	100K	5%	1/10W
R48	1-249-417-11	CARBON	1K	5%	1/4W
R49	1-216-049-11	METAL CHIP	1.0K	5%	1/10W
R50	1-216-065-00	METAL CHIP	4.7K	5%	1/10W
R51	1-216-065-00	METAL CHIP	4.7K	5%	1/10W
R53	1-249-429-11	CARBON	10K	5%	1/4W
R54	1-249-399-11	CARBON	33	5%	1/4W (E3,EA,MY,SP,HK,TW)
R55	1-216-162-00	METAL CHIP	33	5%	1/8W
R56	1-249-393-11	CARBON	10	5%	1/4W
R91	1-216-295-11	METAL CHIP	0	5%	1/10W (AEP,UK,EE)
R91	1-216-065-00	METAL CHIP	4.7K	5%	1/10W (E3,EA,MY,SP,HK,TW)
R92	1-216-073-00	METAL CHIP	10K	5%	1/10W (AEP,UK,E3,EA,MY,SP,HK,TW,EE)
R93	1-216-073-00	METAL CHIP	10K	5%	1/10W (E3,EA,MY,SP,HK,TW)
R94	1-216-073-00	METAL CHIP	10K	5%	1/10W (AEP,UK,E3,EA,MY,SP,HK,TW,EE)

<VARIABLERESISTOR>

RV41	1-238-601-11	RES,ADJ,CARBON 22K (AM TUNING LEVEL)
RV42	1-238-600-11	RES,ADJ,CARBON 10K (FM TUNING LEVEL)

<COIL>

T1	1-409-505-11	COIL(ANT.SW3) (E3,EA,MY,SP,HK,TW)
T2	1-402-960-11	COIL(OSC.SW3) (E3,EA,MY,SP,HK,TW)

<TERMINAL>

TM1	1-537-238-11	TERMINALBOARD(ANT) (ANTENNA) (E,EA,MY,SP,TW,HK,MX,AR,AUS)
TM1	1-537-488-11	TERMINALBOARD(ANT) (ANTENNA) (AEP,UK,G,IT,EE)

<VIBRATOR>

X21	1-760-549-11	VIBRATOR,CRYSTAL (4.5MHz)
X41	1-760-220-11	FILTER,CERAMIC (10.7MHz)
X42	1-527-981-00	FILTER,CERAMIC (450KHz)
X43	1-577-075-11	OSCILLATOR,CERAMIC (456KHz)

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*	1-658-263-13	TRANSFORMER BOARD
		**********
	1-533-217-31	HOLDER, FUSE
*	3-923-762-11	HOLDER (TR) (EXCEPT H11J)

< CONNECTOR >

* CN851	1-580-230-31	PIN, CONNECTOR (PC BOARD) 2P
* CN852	1-564-523-11	PLUG, CONNECTOR 8P
⚠ F801	1-532-279-00	FUSE, TIME LAG (T0.5AL/250V)
⚠ F802	1-532-078-00	FUSE, TIME LAG (T1.0AL/250V) (E,EA,AR,HK,MX,MY,SP,TW)

< RESISTOR >

⚠ R814	1-219-119-81	FUSIBLE	0.1	5% 1/4W F
⚠ R815	1-219-119-81	FUSIBLE	0.1	5% 1/4W F

< SWITCH >

⚠ S801	1-572-675-11	SWITCH, POWER VOLTAGE CHANGE (VOLTAGE SELECTOR) (E,EA,AR,HK,MX,MY,SP,TW)

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MISCELLANEOUS
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4	1-533-217-31	HOLDER, FUSE
⚠ 9	1-558-943-41	CORD, POWER (E,MX)
⚠ 9	1-575-651-21	CORD, POWER (AEP,G,IT,EA,EE,ARHK,MY,SP,TW)

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

Ref. No.	Part No.	Description	Remark
⚠ 9	1-696-845-11	CORD, POWER (AUS)	
⚠ 9	1-751-522-11	CORD, POWER (UK)	
⚠ 11	1-569-007-11	ADAPTER, CONVERSION 2P (E3)	
⚠ 12	1-569-008-11	ADAPTER, CONVERSION 2P(EA,MY,SP,TW)	
⚠ 13	1-770-019-11	ADAPTOR, CONVERSION PLUG 3P (HK)	
71	1-776-220-11	WIRE (FLAT TYPE) (19 CORE) (H11J)	
71	1-777-061-11	WIRE (FLAT TYPE) (19 CORE) (H11)	
74	1-769-966-11	WIRE (FLAT TYPE) (11 CORE) (H11J)	
74	1-777-062-11	WIRE (FLAT TYPE) (11 CORE) (H11)	
76	1-773-167-11	WIRE (FLAT TYPE) (21 CORE) (H11J)	
76	1-777-060-11	WIRE (FLAT TYPE) (21 CORE) (H11)	
77	1-773-052-11	WIRE (FLAT TYPE) (17 CORE)	
80	1-543-738-41	CORE, RING (AEP,G,IT,EE,UK)	
303	1-452-719-11	MAGNET ASSY	
⚠ 355	8-848-387-11	OPTICAL PICK-UP KSS-213BA/S-N	
356	1-769-069-11	WIRE (FLAT TYPE) (16 CORE)	
FL501	1-517-473-11	INDICATOR TUBE, FLUORESCENT	
⚠ F801	1-532-279-00	FUSE, TIME LAG (T0.5AL/250V)	
⚠ F802	1-532-078-00	FUSE, TIME LAG (T1.0AL/250V)	(E,EA,AR,HK, MX,MY,SP,TW)
HP101	1-500-093-11	HEAD, MAGNETIC (PLAYBACK)	
HRPE101	1-500-094-11	HEAD, MAGNETIC (REC/PB/ERASE)	
M1	A-2004-409-A	MOTOR ASSY, CAPSTAN (CAPSTAN)	
M2	A-2004-410-A	MOTOR ASSY, DC (TRIGGER)	
M101	X-4917-523-4	MOTOR ASSY (SPINDLE)	
M102	X-4917-504-1	MOTOR ASSY (SLED)	
M903	A-4604-363-A	MOTOR (L) ASSY (LOADING)	
⚠ S801	1-572-675-11	SWITCH, POWER VOLTAGE CHANGE (VOLTAGE SELECTOR)	(E,EA,AR,HK,MX,MY,SP,TW)
⚠ T801	1-429-450-11	TRANSFORMER, POWER (AEP,G,IT,EE,UK)	
⚠ T801	1-429-451-11	TRANSFORMER, POWER (E,EA,AR,AUS,HK,MX, MY,SP,TW)	

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HARDWARE LIST

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#1	7-685-647-79	SCREW +BVTP 3X10 TYPE2 N-S
#2	7-685-662-79	SCREW +BVTP 4X14 TYPE2 N-S
#3	7-685-649-79	SCREW +BVTP 3X14 TYPE2 IT-3
#4	7-682-548-04	SCREW +BVTT 3X8 (S)
#5	7-685-646-79	SCREW +BVTP 3X8 TYPE2 N-S
#7	7-621-770-67	SCREW +BVTT 2.6X6 (S)
#8	7-685-533-19	SCREW +BTP 2.6X6 TYPE2 N-S
#9	7-621-775-00	SCREW +B 2.6X3
#10	7-623-921-01	RING, RETAINING, CAPSTAN
#11	7-621-775-10	SCREW +B 2.6X4
#12	7-621-255-15	SCREW +P 2X3
#14	7-685-534-19	SCREW +BTP 2.6X8 TYPE2 N-S
#15	7-685-131-19	SCREW +B 2.6X4 TYPE2 N-S

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.